FOOD INDUSTRIES

The Journal Devoted to the Problems of the Food Manufacturer

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Overcapacity: Neglected Distribution Factor

WHY DOES the whole subject of distribution become more acute every year? Why are so many of the profits given away? Answers aplenty could be given to these questions, but every searching inquiry comes back to the problem of distribution. Some corporation heads have stated that problems of distribution are outside the production man's field, but FOOD INDUSTRIES believes otherwise. Problems of actual selling may be outside his province, but he cannot escape all of the problems of distribution.

A SUCCESSFUL manufacturing business calls for a coordination of manufacturing and distribution. When everyone understands the sales and distribution plan, all work more intelligently toward the goal of satisfied customers and net profits.

OUTSTANDING above all other facts—yet seldom mentioned as a factor in distribution of all goods, but of foods in particular—is the great increase in the ratio of productive capacity to the much smaller increase in number of consumers, or to the existing consumer capacity. Failure to consider this increased ratio of production to consumption omits the most important of known facts.

WHEN either production or capacity to produce runs far ahead of consumption, the problems of selling at a profit are correspondingly increased. If you doubt it, then reverse the ratio and see how the procuring end of distribution services will work over-time to locate a manufacturer with something to sell, and bid for his goods. Remember 1917!

WE MUST FACE the facts and admit that productive capacity is not correctly geared to consumption. Furthermore, when all manufacturers are trying to force their goods through to the consumer, the trade and the consumer have a wide latitude of choice and become just as aggressive as the manufacturer.

THOSE who have succeeded in introducing new products have always had a new idea as a basis, but their success came only after an accurate survey before entry into the crowded field. Such factors as markets and consumer capacity, their own resources, selling ability, and probable consumer acceptance, were weighed and found favorable before undertaking the venture.

AS LONG as this is a free country, where anyone can enter a business, there will be always more or less overcapacity. This brings the ultimate solution of distribution problems back to the production man. The time must come when the plant which he operates can be run at a profit even at considerably less than capacity. Modernization is one of the ways to accomplish it. A complete redesign of many plants along wholly new lines may be the way.

IN THE MEANTIME, sales departments are doing their utmost in this situation which has created the aggravated problems of distribution that make for profitless selling. Only by successful solution of these problems can food manufacturers operate at all and still stay in business in an overcapacitated industry. It is up to manufacturers to solve their own side of the problem. Distributors have troubles of their own.

Distribution Success

Is Based on Knowledge of

Fundamental Economics

FOOD MANUFACTURING brings a profit only when distribution and marketing are successfully carried out. Hence programming production in the food plant demands a knowledge of the channels of distribution, of sales, and of consumption. These factors are just as important to the production manager as the factors of raw-materials supply, factory labor, manufacturing equipment and methods, or the essential items of plant-operating cost.

Because of this interdependence of production, distribution, and markets, the economic basis of the food industries should be known to all concerned, if they are so to coordinate their efforts as to bring about profitable operation. Unfortunately, all the factors that should be considered cannot be brought to hand, as the information now available for this purpose is inadequate. The food consuming habits of the individual consumer, and the trends that make for change in these habits; the annual expenditure of the individual for food, and how this amount is divided among the foods offered for his choice; the relations of the food industries to other industries with which they compete for the consumer's dollar; the relation of the food industries to agriculture, the basic industries upon which they depend for raw materials; the position of wholesale and retail food trade; the financial position of the food industries; these are but a few of the economic factors that should be considered.

On this and four succeeding pages some of these economic fundamentals are discussed and presented by chart and tabulation. These will serve as a guide to the kind of information that should be gathered by the individual food manufacturer and upon which plans should be based.

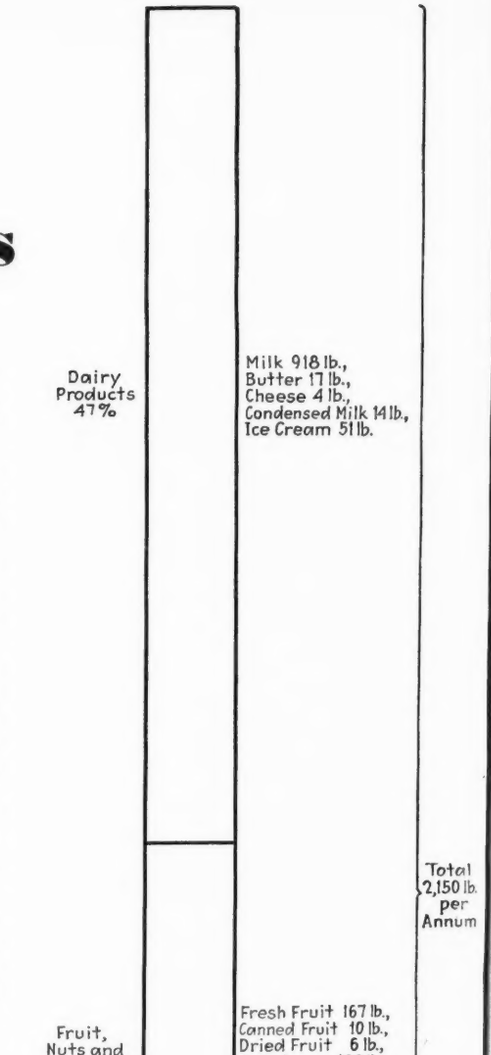
THE TYPICAL DIET of the American people, of course, is the starting point for any analysis of the industry as a whole. The accompanying chart pictures the average annual consumption of foods as estimated by the Foodstuffs Division of the Department of Commerce.

Consumption of food by the American people is determined in some measure by the biological requirement for sustaining life. Habit, however, is a more important consideration, since there is an abundance of all classes of food available for substantially all classes of the population. Freedom of choice, therefore, may be exercised in the selection of diet; and the taste of the population as a whole determines the make-up of the average ration.

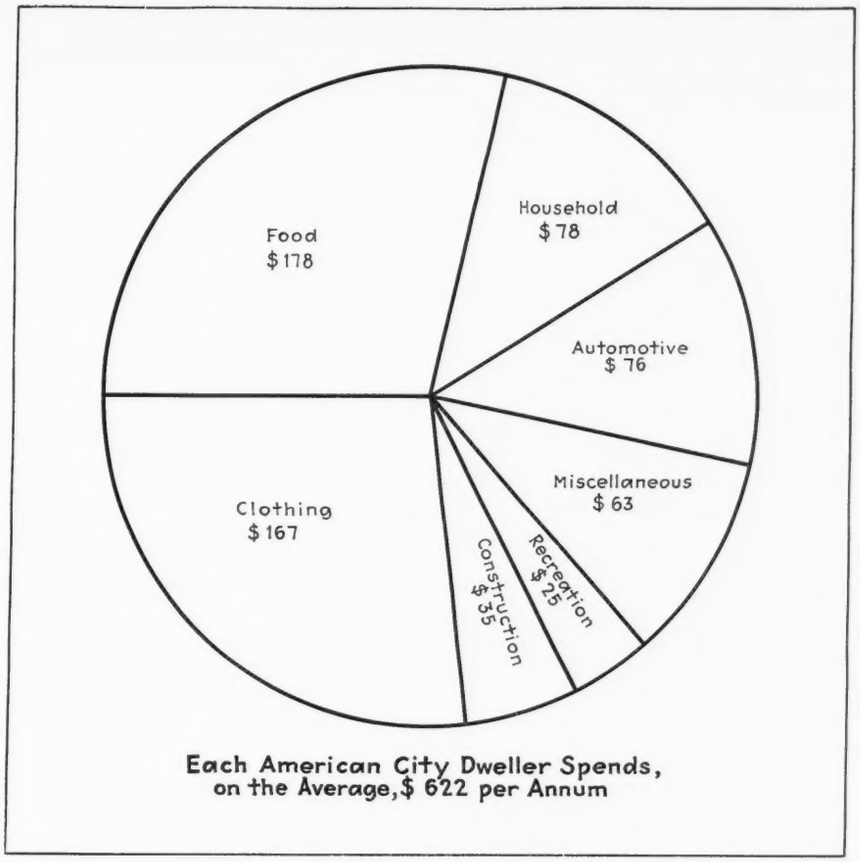
Statistics indicate several important facts regarding the eating habits of this country. It appears that the per capita consumption of protein, of carbohydrates, and of fat is not materially different today from what it was 30 years ago. The source from which each of these major food constituents is drawn, however, has been significantly modified. For example, the consumption of carbohydrates in the form of wheat flour and corn meal has declined apparently by fully 30 per cent since the beginning of the century. This decrease in carbohydrate consumption, however, has been offset largely, if not wholly, by the great increase in the use of sugars, both when used as such and in confectionery and other manufactured products, and also the other sugars obtained through the largely increased consumption of milk, fresh fruits, and vegetables.

This interrelationship of the carbohydrate foods suggests one interesting possibility of broad significance to any food manufacturer. If candy can substitute for bread, or milk sugar for corn meal, there apparently is at all times an urgent necessity for intensive study of all food habits, not only with respect to the commodity manufactured but also with respect to all other foodstuffs.

Apparently the total bulk of the food taken into the human stomach is more or less definitely limited by the habit of the individual. There has been a substantial increase in the use of bulky foods such as fresh vegetables, fresh fruit, and salad materials. It may even be that the bulkiness of these fruits and vegetables has been an important factor in the decline of the appetite for the bulky carbohydrate products, such as breadstuffs. This decline in the desire for bread, leaving some deficiency in carbohydrate supply, may in turn have been a significant factor in stimulating the use of the more concentrated carbohydrate foods: sugar, candy, and other sweets. There is no convincing evi-


Dairy Products 47%
Milk 918 lb., Butter 17 lb., Cheese 4 lb., Condensed Milk 14 lb., Ice Cream 51 lb.
Fruit, Nuts and Vegetables 25%
Fresh Fruit 167 lb., Canned Fruit 10 lb., Dried Fruit 6 lb., Potatoes 180 lb., Fresh Vegetables 152 lb., Canned Vegetables 28 lb., Nuts 10 lb.
Cereal Products 11%
Wheat Flour 177 lb., Corn Meal 24 lb., Prepared Flour 7 lb., Breakfast Foods 12 lb., Macaroni, Etc., 4 lb., Rice 5 lb., Rye, Malt, and Buckwheat 9 lb., Other Cereal Produts 2 lb.
Meats and Related 9%
Beef 62 lb., Pork 70 lb., Veal 8 lb., Mutton and Lamb 5 lb., Poultry 20 lb., Eggs 18 doz., Canned Fish 4 lb., Fish, Smoked, Dried, Etc., 2 lb.
Sweets 5½%
Sugar 102 lb., Candy 12 lb.
Fats and Oils 1½%
Lard 14.2 lb., Tallow 0.5 lb., Cod 0.2 lb., Margarine 2 lb., Cocoanut 3.7 lb., Corn 1 lb., Cotton Seed 10.4 lb., Olive 0.7 lb., Palm, Peanut, Soy Bean 0.6 lb.
Miscellaneous 1%
Coffee 12 lb., Tea 1 lb., Cacao 3 lb., Spice 1 lb.
Total 2,150 lb. per Annum

TYPICAL AMERICAN DIET



Each American City Dweller Spends, on the Average, $ 622 per Annum

dence to prove this. But it is not unbelievable that the fresh fruit, vegetable, and salad habit of the American of today has been the most important ally of the sugar and sugar-using industries in the marketing of their products.

INTER-COMMODITY competition among foodstuffs appears to be most intensive in such groups of commodities as those which are commonly used as meat substitutes, affording important protein supply for the diet. Eggs, cheese, poultry, and fish are, of course, outstanding members of this group of commodities. Although it cannot yet be measured statistically, the competition between these foods is very real. Any yardstick for measuring trend in production activity, price, or demand for one of them must take account of both present stocks and prospective supplies of all.

Let us suppose that one had available accurate knowledge of the chick hatch or the poultry population of the country, a knowledge of the stocks on hand of cheese undergoing cure; of poultry, eggs, and fish in cold storage. Might it not be feasible from these statistics compared over a period of time to forecast with some measure of precision the prospective price range for this class of foods? On the basis of such a forecast, might it not even be feasible to gage the desirable extent of fish catch for a forthcoming season, or to indicate to the poultry industry or the cheese manufacturers the urgency for increased production or, on the other hand, the probability of lower price and hence the desirability of restricted activity?

Indexes of this character do not exist. Perhaps they cannot be formulated. It is evident, however, that every management should, wherever possible, seek out for itself those one or more controlling factors which are most significant with respect to its own individual business.

FINANCIAL considerations also enter materially into food consumption. This is natural, since the purchase of food is not only most important because of its basic necessity but also because it forms a large percentage of the total typical American budget. Among the most significant figures bearing on this budgetary relation of food to other commodities are those obtained from the preliminary census of distribution taken in eleven typical cities five years ago. From that study, a break-down of urban purchases per capita has been worked out which permits a very significant analysis to be made of this feature of distribution.

Industrial and institutional use of foods also is an extremely important factor for the industry. No precise statistical estimate has ever been made as to the use of one food plant's product as the raw material for further manufacturing. However, it is well known that of sugar, flour, milk, butter, margarine, vegetable oils, cocoa, spices, and many other commodities, a very large percentage of the production reaches the ultimate consumer only after it has been further processed in another industrial establishment. Substantially all of the raw materials for baking, candy making, beverage manufacture, and many other important food industries are products of contemporary concerns in other divisions of the field.

This problem of inter-plant flow of commodities, generally recognized but quantitatively unstudied, is an important consideration in the marketing problems of almost every producer. A rough estimate has been made by government authorities on the extent to which all American products and imported goods become raw materials for further manufacture. Something over a third of the total available supply of goods, measured by value at point of production or of import, are producers' goods, requiring further manufacture before they reach the ultimate consumption in the household, for construction, for transportation, or for other ultimate service.

Institutional use of industrial products is a somewhat smaller, but still a very important market. In the case of foodstuffs, hotels, restaurants, public institutions, and the like, certainly use a substantial percentage of the total manufactured food. The institutional use of *all* commodities amounts to $18,000,000,000 per year. Of this, it is believed that fully 10 per cent represents foods originating in the manufacturing establishments of the United States. In other words, this outlet must account for at least 10 or 12 per cent of the usage of manufactured and processed foods.

Typical Urban Purchases

In the total of $621.90 there were included foodstuff purchases in eleven typical cities on a per capita basis as follows:

Bakery Products	$11.17
Confectionery, Ice Cream and Soft Drinks	14.61
Fish and Other Fresh Sea Food	1.50
Fruits and Nuts	4.53
Groceries and Delicatessen	59.46
Ice	1.11
Purchased Meals	39.46
Meat and Poultry	27.17
Milk, Butter, Cheese and Eggs	14.80
Vegetables	4.57
	$178.38

Considerations of institutional and industrial food usage are, of course, vital in programming the distribution and marketing problems of the industry. How important they may become, almost without warning, is shown by the material change in the wheat flour distribution of the United States during the past two years, 1930 and 1931. During this period there has been a material increase in the consumption of those brands of flour which find their greatest market in the household. This increase apparently has not been accompanied by a correspondingly large decrease in the institutional or bakery brands of flour. Hence one may infer that there has been during the period of restricted income a tendency toward both greater use of home-baked goods and of wheat-flour products as a whole. This is but one of the shifts between direct household and institutional markets that must always be expected during a period of economic readjustment.

WHOLESALE TRADE

In the United States

The Major Wholesaling Centers of the United States

Greater New York	$16,420,000,000	St. Louis	1,690,000,000
Chicago	5,930,000,000	Kansas City, Mo. and Kan	1,480,000,000
Boston	2,410,000,000	Cleveland	1,180,000,000
Philadelphia	2,260,000,000	Minneapolis-St. Paul	1,070,000,000
San Francisco	1,780,000,000	Total in 12 centers	$38,900,000,000
Detroit	1,580,000,000	Next 38 centers	13,260,000,000
Pittsburgh	1,560,000,000	Total (75 per cent of U. S. total)	$52,160,000,000
Los Angeles	1,540,000,000		

WHOLESALE merchandising in the United States is not only done by establishments of large unit size but also is greatly concentrated geographically. The Census of Distribution figures show an annual volume of business of approximately $70,000,000,000. This figure exceeds not only the gross value of manufactured products but also exceeds the volume of retail business by nearly $20,000,000,000. This latter difference is accounted for by export and import trade and by duplicate sales at wholesale of goods which pass through the hands of more than a single merchandising unit before reaching the retailer.

A few cities include within their corporate or near-by tributary areas the bulk of the wholesaling activity of the nation. Naturally, these communities are those with the largest population, points logical for the bulk distribution of goods of any type. The twelve such business centers marked conspicuously with large circles on the map account for 56 per cent of all the wholesaling activity of all classes of goods in the United States. If one adds the 38 additional centers marked on the map with smaller circles, he has then enough additional business to account for 75 per cent of all wholesale merchandising.

The distribution of food has not been separately analyzed from the standpoint of geographic or commodity characteristics. There is every reason to believe, however, that the distribution of foods follows closely along the lines for commodities as a whole. This would be particularly to be expected because food consumption naturally conforms to the distribution of population, and the general purchasing power of any area.

Seventy-five per cent of U. S. wholesale trade is concentrated in 50 cities

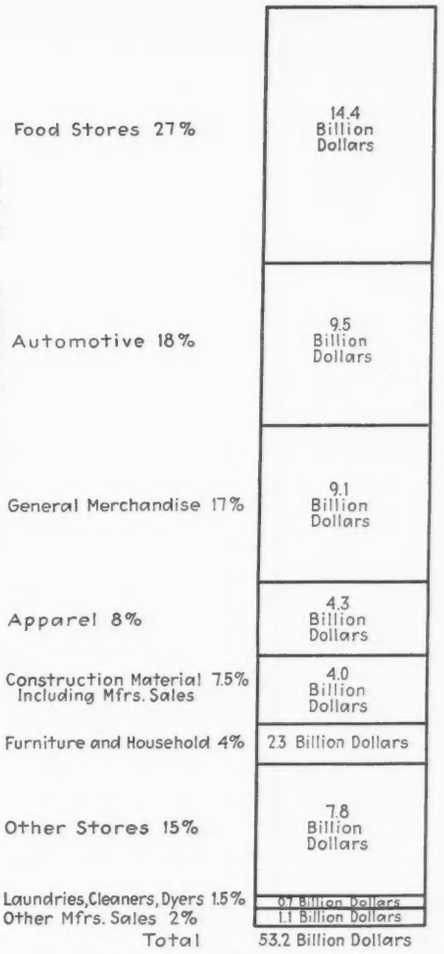
RETAIL TRADE

In the United States

RETAIL DISTRIBUTION of foods takes place through many types of channels. Retail food stores, of course, are the major agency, accounting for the delivery to consumers of $11,300,000,000 worth of goods, or 22.6 per cent of the entire retail establishment activity of the country. Direct sales of bakery products and of dairy products care for substantial quantities of these foods; hotels and restaurants also are important retail food merchandising factors. On the assumption that the non-food products sold by retail food stores are just offset by the foodstuffs sold in general merchandising establishments and in country general stores, one has the following summary of the retail food merchandising of the United States.

Retail food stores	$11,310,000,000
Direct sales of bakery products	420,000,000
Direct sales of dairy products	200,000,000
Hotel dining room sales	370,000,000
Restaurant sales	2,100,000,000
	$14,400,000,000

This distribution accounts for 27 per cent out of the total of $53,200,000,000 of United States retail activity. Graphically, this food service is compared in the accompanying chart with other types of retail merchandising.

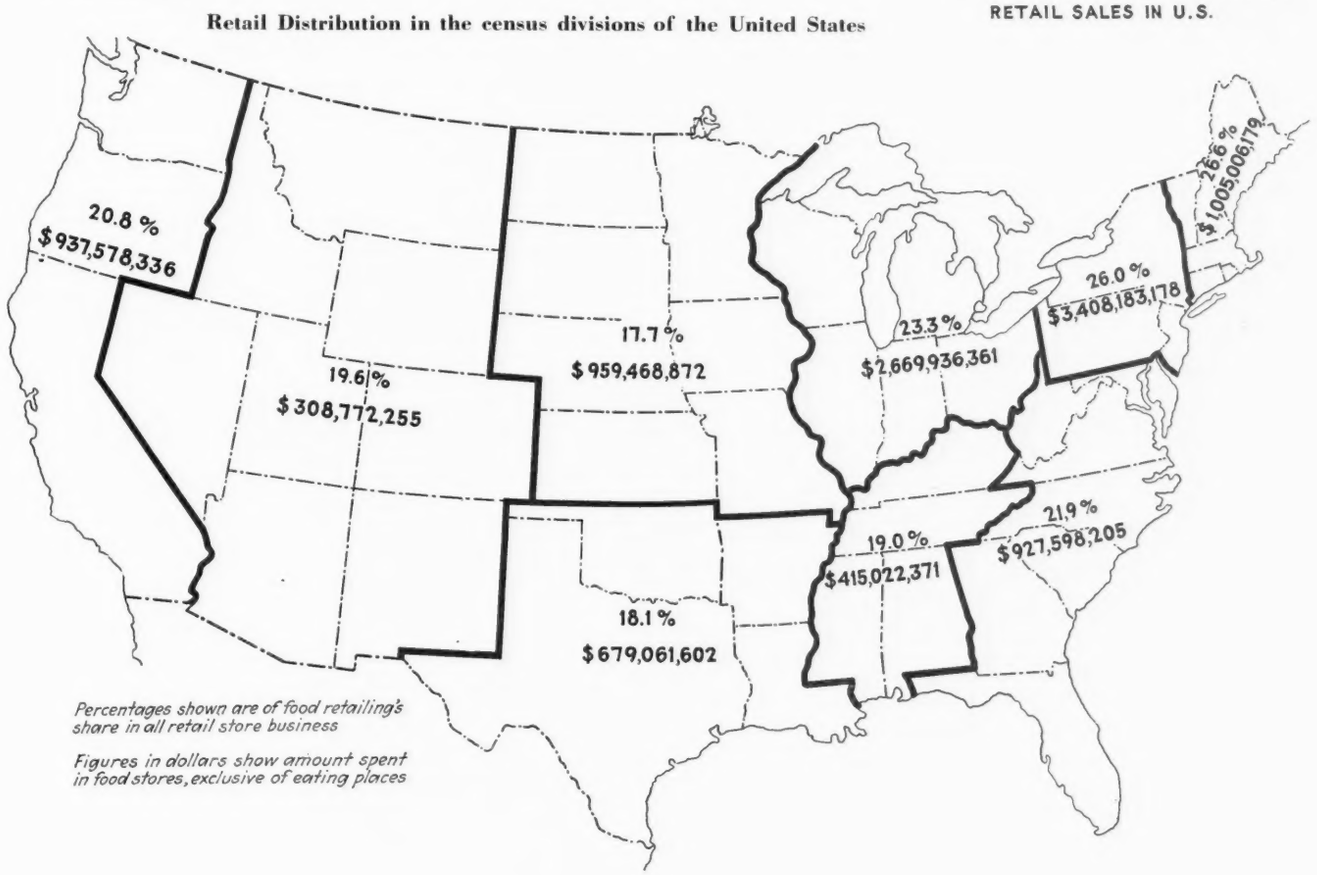


RETAIL SALES IN U.S.

Food Business Done Through Chain Stores

Kind of Business	Number of Chains	Number of Stores	Total Net Sales (1929)	Chain Percentage Compared to All Stores
Food group, total	1,448	61,346	3,508,923,218	28.5
Candy, nut and confectionery chains	123	1,461	53,893,969	7.8
Dairy products chains	85	1,201	335,561,369	42.7
Fruit and vegetable market chains	51	383	15,426,330	4.9
Grocery and meat chains (*total*)	1,040	56,431	3,022,627,380	33.3
Grocery chains	313	12,330	490,946,311	13.1
Combination store chains:				
Grocery store chains with meats	380	40,184	2,292,857,689	71.3
Meat market chains with groceries	95	933	85,286,456	9.6
Meat market and fish market chains	234	2,753	139,577,081	11.3
Grocery and dry goods store chains	9	187	10,587,371	1.6
Grocery and feed store chains	9	44	3,372,472	....
Caterer and bakery chains	110	1,216	40,572,053	20.4
All other food chains	39	654	40,342,117	....

Retail Distribution in the census divisions of the United States



Percentages shown are of food retailing's share in all retail store business

Figures in dollars show amount spent in food stores, exclusive of eating places

FINANCIAL CONDITIONS

In the Food Field

PROFIT or loss in dollars is the measure of success or failure in any business undertaking. And the figures from which profit or loss are determined—the balance sheet of an industry—tell the initiated whether or not the industry is in a healthy enough condition to operate at a profit in the near future.

Fortunately for the food industries, their profits have continued to be more stable than those of other industries, even in these times of general business restriction. Government reports based on the income tax returns of corporations permit an analysis to be made of the financial structure of food manufacturing corporations. The accompanying tables, drawn from that source, summarize operations and give a composite balance sheet for this group for the year ending Dec. 31, 1929, the latest data for which summaries are yet available.

A table appearing on this page shows, for some of the groups that go to make up the food industries, the number of corporations, their gross incomes, and their profit or deficit. These figures for profits and deficits have considerable significance. They indicate that but few corporations are making large profits, most, as is also the case in other branches of manufacturing, operating not far from a point that brings neither profit nor loss.

General figures of gross income, net income, and deficit, over a period from 1921 to 1930, indicate the trend in the food field. As would be expected, the figures for gross and net show an almost steady rise until 1929. In that year gross fell off, while net continued its rise. In 1930, gross fell off still further, while net also experienced considerable decrease. Deficits have increased somewhat over the average in these last two years, although not nearly as high as the deficits shown for the individual years 1921 and 1922. These figures are tabulated elsewhere on this page.

Undoubtedly, the larger units in the field have made progress during this period that has been substantially above the average for other industries. Evidence of this is obscured, however, in the totals because of the continued existence of a large number of smaller concerns which in the aggregate make up the majority of the industry.

Composite Operating Summary of the U. S. Food Industry

	Per Cent	
RECEIPTS		
Gross sales	97.95	$14,474,000,000
Interest	.50	65,000,000
Rents	.19	28,000,000
Dividends, security profits, etc	.44	75,000,000
Non-operating profits	.40	58,000,000
Miscellaneous	.52	76,000,000
	100.00	$14,776,000,000
DISBURSEMENTS		
Cost of goods sold	79.66	$11,771,000,000
Compensation of officers	.91	135,000,000
Interest	.97	144,000,000
Bad debts	.22	32,000,000
Depreciation	1.48	218,000,000
Depletion	.01	2,000,000
Taxes, not on income	.60	88,000,000
Other tax deductions	11.84	1,749,000,000
	95.69	14,139,000,000
Net profit (taxable)	4.31	637,000,000
	100.00	$14,776,000,000

Composite Balance Sheet of U. S. Food Corporations

ASSETS	
Cash	$530,000,000
Inventories	1,943,000,000
Accounts receivable	1,239,000,000
Investments	1,245,000,000
Real estate, buildings, equipment	3,713,000,000
Miscellaneous	1,130,000,000
	$9,800,000,000
LIABILITIES	
Accounts payable	$1,262,000,000
Bonds and mortgages	977,000,000
Miscellaneous	565,000,000
Preferred stock	1,378,000,000
Common stock	3,515,000,000
Surplus and undivided profits (net)	2,103,000,000
	$9,800,000,000

Gross Incomes, Net Incomes and Deficits of Corporation in the Food Manufacturing Industries, 1929

(From Statistics of Income, 1929, U. S. Treasury Dept.)

Group	Total No. of Returns	Reporting Net Income: No. of Returns	Reporting Net Income: Gross Income	Reporting Net Income: Net Income	Reporting Deficit: No. of Returns	Reporting Deficit: Gross Income	Reporting Deficit: Deficit
Bakery and confectionery products	3,546	2,117	$1,364,534,202	$128,822,733	1,303	$236,071,385	$17,803,557
Canned Products — Fish, fruit, vegetables, poultry, etc.	1,803	1,068	814,758,501	74,065,989	602	92,459,372	7,541,461
Mill products — Bran, flour, feed, etc	1,348	740	1,181,659,141	39,067,147	534	199,337,739	7,401,192
Packing House Products — Fresh meat, ham, bacon, lard, meat canning, etc	762	469	2,758,371,796	32,122,667	269	2,688,042,744	10,359,931
Sugar — Cane, beet, maple, etc	204	93	684,208,846	48,582,258	99	151,816,252	15,292,116
Beverages, soft drinks, cereal beverages, mineral waters, etc	2,302	1,276	382,511,942	60,508,668	898	56,844,225	11,041,762
Other food products — Dairy products, coffee, spices, cereals, etc.	5,159	3,282	2,455,915,178	157,016,570	1,675	430,154,745	18,280,979
Totals	15,124	9,045	$9,641,959,606	$540,186,032	5,380	$3,854,726,462	$87,720,998

Growth of the Food Industries as Indicated by Incomes and Deficits

(From Statistics of Income, 1929, and preliminary report for 1930, U. S. Treasury Dept.)

Year	Total No. of Returns	Reporting Net Incomes: No. of Returns	Reporting Net Incomes: Gross Income	Reporting Net Incomes: Net Income	Reporting Deficits: No. of Returns	Reporting Deficits: Gross Income	Reporting Deficits: Deficit	Inactive
1921	13,777	7,207	$5,519,503,463	$319,176,273	6,570	$2,750,043,401	$309,161,987	...
1922	14,087	8,359	6,812,387,633	447,671,380	5,728	2,053,035,160	150,306,300	...
1923	14,153	8,666	8,511,235,848	506,924,386	5,487	1,566,632,061	124,175,970	...
1924	14,442	9,080	10,745,132,363	536,852,421	5,362	1,101,836,666	95,715,254	...
1925	14,722	9,303	11,476,442,509	533,472,244	5,419	1,923,746,578	91,512,114	...
1926	15,505	9,239	11,678,178,959	592,440,172	6,266	1,797,883,399	95,308,802	...
1927	15,524	9,232	9,702,208,946	585,820,452	5,630	4,212,282,626	108,190,639	662
1928	15,404	9,082	12,732,301,753	639,770,167	5,586	1,516,525,820	79,965,204	736
1929	15,561	9,288	10,862,489,504	672,867,703	5,557	3,905,162,329	92,662,560	716
1930*	14,636	7,836	6,598,636,589	488,951,668	6,211	4,174,197,052	120,836,434	589

*Returns filed to Aug. 31, 1931.

A Lawyer Looks at Distribution

By DANA T. ACKERLY
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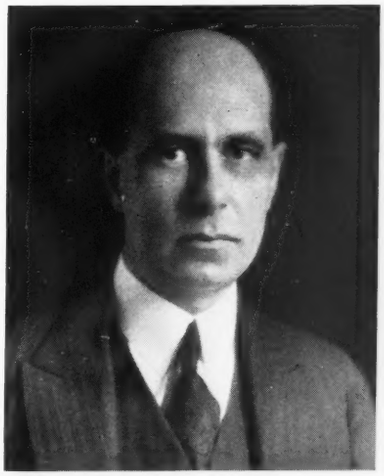

EVERYONE his own economist! Production, consumption, foreign trade, depressions, statistics, charts and graphs all have become important parts of our daily lives, whether we be manufacturers, bankers, merchants, or lawyers. It seems the fashion now to say that no expert or prophet has been right since the opening of the Great War. And certainly among the greatest errors of all have been those in the realm of economics. The world is now engaged in clearing away the wreckage and groping for solid ground.

Among the problems crying out for solution is the age-old puzzle of distribution. Several branches of the government, chambers of commerce, collegiate schools of business, and many public and private agencies have been and are devoting much effort and vast sums of money to the study of this subject.

Middleman a Necessity

In all this investigation the dominant note seems to be adverse criticism of distribution as it is. The distributor not exclusively engaged in retailing is still branded middleman. Critics are ever talking of the person or the agency and overlooking the important functions performed. More progress would be made on the subject of the so-called middleman if some of his many critics among people in high places, as well as among the men in the street, would pause to reflect that everything the jobber, wholesaler, retailer or other distributor, under whatever name, does, must be done by someone.

Coal at the West Virginia mine pits affords the citizens of Chicago very little protection against the wintry blasts off Lake Michigan. The railroads, the coal dealers, and the trucking companies, all of whom are these much maligned middlemen in this industry, give the coal its value by making it available to the Chicago householder. Also, pineapple is much more nourishing in the human stomach than in Hawaii.

We exempt farmers and grocers and some other favored ones from certain provisions of the Sherman Act. There is growing sentiment that coal, lumber, oil, and other primary industries should be somewhat relieved from the effect of that statute, but only a thin, small voice is raised for the middleman.

An analysis of the current proposals for new and increased taxes, both federal and state, at once discloses that much more than his share of the load is to be piled upon the shoulders of the distributor. We berate and hamstring him and yet expect him to carry on for a rapidly diminishing rate of return—and more often, nowadays, at a loss—just for the love of service to the producer or manufacturer, on the one hand, and the consumer, on the other hand. Chaotic conditions in the basic industries, brought about by overproduction, fall nowhere more heavily than upon the merchant—that is, the distributor—who is the warehouse, the carrier, and merchandise banker for the world.

An amendment of the anti-trust laws, relieving basic industries and merchants generally of some of the restrictions now imposed, would greatly alleviate present economic ills. Some astute political observers say that no liberalizing of the anti-trust laws could command a majority in the House and Senate unless the amendment contained also regulatory provisions empowering some agency of the government to supervise the business, and particularly the prices, of every industry or group desiring to avail itself of the proffered benefits of the amendment. If this means, as it apparently does, that the government will enter business even to the extent that it did through the Railroad Administration or that it has through the Federal Farm Board, then neither business men nor taxpayers can be expected to view the prospect with any large measure of enthusiasm. Full repeal would be less expensive for the taxpayer.

Dana T. Ackerly, a lawyer of exceptionally broad experience, happily combines with his legal knowledge a thorough and sympathetic understanding of the practical problems of business. He is keenly conscious of the struggle that various long-established distributive agencies have had to maintain their position under constantly changing conditions and is well able to trace the influence that existing laws have had upon business. Mr. Ackerly and his associates act as counsel for a number of important associations, among them the National Coffee Roasters' Association, the National Wholesale Grocers' Association, the National Electrical Wholesalers' Association, the Association of Cotton Textile Merchants.

—The Editor.

Amend the Sherman Act

The fear that reasonable modification of the trust laws would result in burdens for consumers overlooks the fact that human nature and the competitive urge in all men has always presented a greater obstacle to attempted monopoly, price-fixing, or other restraints of trade than has the Sherman Act or any kindred statute of this or foreign countries.

Some study of conditions in certain of our states, and in foreign jurisdictions not blessed with a Sherman Act or any near counterpart thereof, should convince the lawmaker that government interference to the extent of participation in or restrictive supervision of private business is more hurtful than beneficial to the general public, particularly the taxpayer. Economic laws

are more inexorable than any man-made statutes. The latter are sporadically and imperfectly enforced, but the present world-wide misery is sufficient proof for the present generation, and, we trust, for its children, that punishment for economic excesses is not only inevitable but is far more cruel than statutory fines and penalties. Atlanta at least provides food and shelter.

The Capper-Kelly Bill

The difficulty of securing from Congress even a small degree of relief from the shackles imposed by the Sherman Act is strikingly illustrated by the adversities of the Fair Trade Act, generally known as the Capper-Kelly Resale Price Maintenance Bill. After more than fifteen years of the sincerest effort to enact some permissive resale price measure, this bill was done to death, in 1931, on the floor of the House at the closing session of the Seventy-first Congress. One might have supposed from the bitter attacks upon it that the bill was a skillfully masked creature of some frightful monopoly intent upon sucking the life blood from the American consumer. Yet it is a simple measure, urged by tens of thousands of independent merchants and manufacturers in the hope of securing for themselves and their private trademarks some modest measure of protection against the sales piracy of certain competitors, including notably some of the largest merchandising units and aggregations of capital in the United States.

One of the arguments most vigorously advanced by some of the opponents of the bill was that it would not work, but the ferocity of their attack bespoke much faith in the efficiency of such a measure, if enacted. The proposed law, far from being a device of monopoly, is so phrased as to exclude any possibility of its use to monopolize any article of commerce; it merely offers the lawful owner of a valuable name or trademark, whether manufacturer or merchant, a means of making some defense against price raids upon him.

Mr. Justice Holmes, who has never been suspected of monopolistic sympathies, has said:

> I think that, at least, it is safe to say that the most enlightened judicial policy is to let people manage their own business in their own way, unless the ground for interference is very clear . . . I think that we greatly exaggerate the value and importance to the public of competition in the production or distribution of an article (here it is only distribution) as fixing a fair price. What really fixes that is the competition of conflicting desires. We—none of us—can have as much as we want of all the things that we want. Therefore, we have to choose . . . I cannot believe that in the long run the public will profit by this court permitting knaves to cut reasonable prices for some ulterior purpose of their own and thus to impair, if not to destroy, the production and sale of articles which it is assumed to be desirable that the public should be able to get.

Later, in a resale price maintenance case that divided the United States Supreme Court five to four, Mr. Justice Holmes, again dissenting, said that resale price maintenance in such cases was not unfair to anyone.

The Interstate and Foreign Commerce Committee of the last House, in recommending passage of the Capper-Kelly Bill, said:

> It is generally and properly recognized that the gradual extinction of small independent dealers will be a loss to countless communities throughout the nation, and so to the nation itself.

The committee, with equal truth, might have pursued its argument by emphasizing also the importance to their communities and to the nation of all distributors, large and small. The country needs them and can prosper only as they prosper. They must have equal opportunity and a wise measure of protection against ruinous competitive excesses.

Moreover, producers and manufacturers themselves are now taking a new interest in their distributors. It has been painfully evident to increasing numbers of manufacturers, in the past two years, that the cavalier attitude some of them adopted toward the lowly wholesaler and retailer in the years before the epic autumn of 1929 was quite as grave a social and economic error as making faces at one's banker.

Danger in Restricted Outlets

The sale of a trainload to one customer is a tidy transaction, well calculated by the wily purchaser to give any manufacturer a gratifying sense of fancied inpregnability, but it can also be the beginning of the end. The manufacturer who enjoys running his own business wants more than a few distributors. He wants many outlets, both large and small.

Understanding, and therefore solution, of the problems of distribution for the manufacturer, for the distributor himself and for the public is not greatly promoted by the current habit of contrasting big business with small business. The debates between the champions of each are becoming most intemperate. Is all big business efficient and all small business inefficient? Is the one faring any better than the other in the present economic maelstrom?

Big business, whether in production or distribution, is not modern. We have but to recall, among countless others, the Hudson Bay Co. and the English East India Co. The latter was founded in the sixteenth century and was later incorporated by royal charter from Queen Elizabeth, Dec. 31, 1600. This charter conferred the sole right of trading with all countries lying beyond the Cape of Good Hope and the Straits of Magellan. It grew into a great chartered company with the right to acquire territory, coin money, command fortresses and troops, and make war and peace. It brought India, with her hundreds of millions of people and her wealth, to the British Crown.

We shall always need and should ever welcome the large, as well as the small, in production and in distribution. The test of quality will continue to be not size but integrity and management. Not all will survive, but certainly the plight of many great corporations and the varying fortunes of numberless enterprises in America and Europe today should drive home the truth taught us by centuries of economic history that neither the large nor the small has any monopoly of success or endowment of immortality.

Commerce Asks No Dole

The gravest economic difficulties of today are problems not only of production but of distribution and consumption. The economic misery of the past two years will not have been wholly in vain if it drives home the realization that no small degree of our suffering is the direct result of unbridled competition in production, in manufacture, and especially in distribution.

Our own government could do no better in this crisis than to recognize that the manufacturer and distributor deserve some of the tender regard that has been lavished upon the farmer with so little appreciation from him and so much pain for the taxpayer. Commerce asks no dole, nor anything comparable to the Federal Farm Board, nor the virtual exemption granted farmers and labor unions, but the country would be advanced on the road to recovery if the government would grant business some intelligent modification of the archaic Sherman Act and similar legal restrictions that add so much to the grave burdens already borne. The vast numbers of individuals and corporations engaged in the great field of commerce, called distribution, seek only to be allowed a reasonable measure of self-government through cooperative effort, so that they who must alone bear the losses that inevitably come may be accorded a little freedom in the conduct of their own affairs and some reasonable opportunity of gain. That was the American fashion in an earlier day. Then came government paternalism, bureaucracy, and interference until we now find commerce, and particularly distribution, hedged about with restrictive laws, beset by ruinous competition, and yet compelled to pay to its federal and state taskmasters from 12 to 40 per cent of whatever profit may perforce be won in this unequal battle. Surely the bitter experiences of today must convince our people and our public servants that the fashion of that earlier day is the better way—the American way.

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What Must We Do About Distribution?

By O. FRED ROST
Director, Surveys of Distribution
McGraw-Hill Publishing Co.
Marketing Editor, The Business Week

No other factor in the economic equation of American life merits or receives the attention now accorded to distribution. In this article, Mr. Rost brings the reader up to date on the distribution problem and indicates what can be done toward its solution.

DISTRIBUTION as a problem, during the last decade has commanded the attention and serious consideration of manufacturers of foods and other consumer goods to a steadily increasing degree.

During the War and post-war prosperity period much surplus production capacity had been developed in most industries. Hundreds of manufacturers had simply addressed themselves merrily to the task of making more goods, better goods, different goods, on the broad assumption that an unlimited market would always exist.

When orders became scarcer, competition drove prices to ruinous levels, old stand-by customers were seen to drop by the wayside, and many manufacturers found themselves for the first time forced to recognize distribution as a problem separate and distinct from any they had faced before. Their awakening to the problem naturally was followed by numerous more or less successful attempts at a solution, so that this last decade has witnessed an unprecedented series of changes and realignments in the field of distribution.

* * *

It appears that there is considerable difference of opinion as to what functions should properly be considered within the scope of the term distribution, and therefore it seems desirable to explain at the outset just what is meant when the term is used. The term distribution is here considered to cover every activity, function, or factor that directly or indirectly influences or is involved in the process that begins when a product, merely as a product, is finished and that ends when that product has reached the point of final consumption or use.

For instance, in the case of canned food products, the actual process of production ends with the sealing of the can. While distribution directly influences the size of can and volume of contents, its actual function is first exerted on brand and reading matter of the label, then on the style of package, then on the number of units to be assembled into one shipping package, and distribution actively continues in control until the can is in the hands of the final user.

Naturally, this multiplicity of processes and procedures which is covered by the term distribution varies to a greater or lesser degree with the type of product and, due to the influences of demand and competition, is in a continuous state of flux. In some industries distribution has proceeded smoothly for long periods, in others its processes are frequently and seriously disrupted.

The food industry, as the oldest and probably the most important of all our industries, has recorded perhaps the most drastic changes in practices and procedures of distribution. Traced to their source the most significant changes appear to have occurred directly or indirectly as the result of improved means of transportation and communication, while other changes came as the

result of new developments in the art of food conservation, preservation, or processing.

Influence of Transportation and Communication

Since we are not concerned with the historical background of distribution, some developments of the last ten years will amply demonstrate the importance of transportation and communication in their direct influence on methods of distribution.

At the end of the World War, long-distance shipping was still overwhelmingly a matter of using railroad freight service, or in cases of extreme urgency the more expensive but faster railway express. Systematic, dependable distribution by motor truck, properly scheduled as to time and distances, was still impracticable, because the average roads and available tire and trucking equipment did not permit of the necessary speed to make such a plan practicable. Consequently, distribution still proceeded chiefly in the long-established manner.

Since then thousands of miles of good roads have been built, pneumatic truck tires have been perfected so as to be practical and economical. Truck design and construction have improved and heavily loaded trucks can travel at passenger-car speeds, without imposing undue wear and tear upon machine or road. Intrastate and interstate truck transportation has grown until the loss of freight traffic by railroads has become the subject of national alarm.

Aided by communicating roads and truck transportation, the radius of truck shipments has been rapidly extended. Wholesalers and retailers have had to revise their methods of operations. Business transactions involving the buying and shipping of goods have been speeded up. The tendency to buy less at a time but more frequently has grown.

Large distributing organizations such as chain store systems, while on par with other shippers on all railroad freight shipments, by establishing their own distributing service of motor trucks, could effect important economies and were able to supply a larger number of retail units within a larger radius from the central warehouse. Easy motor-car travel between various chain units facilitated inspection and direction by supervisors, district managers and merchandisers, and thereby made possible more efficient and profitable operation of a large number of units.

For instance, the Great Atlantic & Pacific Tea Co., oldest and largest chain store organization in the food field, during 61 years from 1858 to 1919 established but 5,200 units. In the ten years 1919 to 1929, however, the number was increased by 200 per cent so that in 1929 it was reported to have over 15,000 stores in operation. Other wholly owned food chains, regional or local chains and voluntary chains have grown with similar rapidity.

Obviously, chain-store development was directly stimulated by improvements in transportation and communication. However, it would be difficult to cover within the limits of this article all the momentous changes that have taken place in the food distribution field as a direct result of the growing importance of chain-store selling.

In another branch of the food industry improvements in transportation are at present producing changes of which the effect cannot now be measured. The northern portion of our continent has for generations accepted winter as a period during which fresh fruits and vegetables could not be obtained. The advent of canned foods was universally welcomed. Improvements in railroad freight service on perishable goods and, in some instances, the use of airplanes for speedy transportation, now make vast quantities of fresh fruits and vegetables, grown in the Southern states, available to residents in the North during the winter months.

Automobile travel, stimulated by the steadily increasing mileage of communicating good roads, has also had a most profound influence in changing the habits of the consumer and, through him, various practices of distribution. For instance, with the aid of the motor car and good roads, easy access has become possible to cities with their larger stores, more numerous stores, and frequently lower prices. The crossroads general store has had to modernize, do a better job of merchandising, or go out of business.

Numerous other examples could be cited, but the above will suffice to demonstrate how emphatically better methods of transportation and communication have influenced or directly affected distribution.

Influence of New Developments

Similarly important as an influence on distribution has been the development of new and successful methods of food conservation or preservation. However, while laboratory research is today supported by more food manufacturers than ever before, it has not during the last ten years produced many new developments that had a direct influence on distribution. The centralization of the meat packing industry at any one point was completed many years ago, but would have been impractical if refrigeration and refrigerated railway freight cars had not been available. The perfection of successful processes of canning, also accomplished many years ago, marked the beginning of an entirely new period in the distribution of foodstuffs.

During the last two or three years quick-freezing has commanded the attention of the entire industry. Quick-freezing processes of one kind or other have been applied to every type and variety of food products with varying success.

Where problems of production were successfully solved, distribution still remained to be developed, because special equipment is needed to insure delivery in prime condition to the ultimate consumer.

Nevertheless, retail sales of quick-frozen foods are steadily increasing. Manufacturers of low-temperature refrigerating equipment are developing lower-cost display and storage boxes for the wholesaler and retailer. Special trucks with low-temperature compartments are on the market to carry quick-frozen foods from plant to warehouse or to the retailer. Those in close contact with this new development maintain that eventually it will materially change methods now employed in the distribution of many food products.

Waste in Food Distribution

In recent years many changes in the distribution of foods have resulted from direct or indirect attempts of one group or other to gain competitive advantages by the elimination of certain costs or dispensable functions. Chain-store systems have had a definite place in the readjustment of food distribution on a more economical basis.

Chain-store distribution as we know it today has directly eliminated some brokerage and commission fees and costly sales expenses that were formerly involved in the various steps between the producer and the wholesaler and that naturally added to the burden of price that the ultimate consumer had to pay. Chain-store distribution indirectly has eliminated many wasteful practices that wholesalers and retailers of the old school formerly considered indispensable and which directly affected the fortune of the manufacturer.

A fair comparison of prices prevailing in 1920 and those prevailing today cannot help but establish the fact that a substantial reduction has been effected in the spread that formerly existed between the prices paid to the producer and those paid by the ultimate consumer. In other words, that portion of the retail price which represents distribution expenses has been materially reduced.

There can no longer be any doubt but that chain-store organizations have come to stay and must be considered a fixture in our present-day system of food distribution. From this, however, it is not to be inferred that chain stores will ever become our only means of distribution. To the contrary, through the competition from chain stores, independent retailers and wholesalers have been literally forced into what will prove to be a new era of prosperity and usefulness.

It is true that during the decade that witnessed the most rapid development of chain systems large numbers of food wholesalers and retailers have gone out of business. However, these same

wholesalers and retailers probably would have gone out of business regardless of chain competition if some of their independent competitors had voluntarily reformed their wasteful and antiquated methods of doing business and created each an efficient and economically functioning operating unit. The truth of this statement can readily be proved by a study of the type of wholesale and retail establishments that have survived in those territories where chain competition has been a factor.

Many of the food wholesalers in business today have taken some of the best practices of chain systems and applied them to their own business. Some of them have built new warehouses so as to be able to perform the warehousing function with greater economy. Others have reorganized their internal system of doing business to effect quicker, cheaper, and better methods of doing their job.

The salesmen that these modernized wholesalers send out are no longer merely order takers, but instead they have a definite and clear understanding of what their retail customers are up against and are prepared to help them. These modern salesmen are cooperating closely with those retailers to enable them to meet the competition from chain stores operating in their immediate vicinities. In other words, the wide-awake wholesalers have learned to realize that if they wish to stay in business they must build up their retail outlets to meet chain competition effectively and with profit, and they have learned or are learning to do just that.

Business Methods Changed

Similarly, the majority of independent retailers in territories where chain competition is active have remodeled their stores, changed their show windows, store interiors, and fixtures; have altered their methods of doing business to parallel their chain-store competitors. They are not merely succeeding in staying in business but are operating at a better profit than before.

That this is more than mere theory is proved by the fact that after a period of steady increase in failures of retail grocers, reaching its peak in 1928, the number of failures decreased in 1929 and also in 1930, actually dropping over 10 per cent in those two years. These figures are more significant when it is realized that during 1930 the number of failures in practically all other classes increased materially, and for all classes was 20 per cent higher than during the previous year.

In the food industry this desire for elimination of waste has found other means of expression. We have witnessed the creation of such gigantic organizations as General Foods Corp. and Standard Brands, Inc. Similar organizations of lesser size have already been formed or are reported to be in prospect.

It is very probable that the organizing genius behind General Foods Corp. did not dream of producing at much lower costs the goods made by the various companies that were eventually merged. Nor did he dream that by any process of magic the sales on the various commodities could be stimulated suddenly and so tremendously as to warrant the labor of the tasks involved in the merging. It is extremely likely, however, that the entire plan was conceived principally because of the savings in sales, warehousing, accounting, transportation and administrative expenses that could be effected—in other words, the cutting out of waste in distribution.

In the case of General Foods Corp., we know that formerly separate salesmen of the various individual companies called on retailers to promote the sale

of their goods. Each call represented a considerable expenditure of time and money not only on the part of the manufacturer but on the part of the retailer who was compelled to listen to the story.

Today one representative of General Foods represents all those companies. He concentrates his work in a comparatively small district and calls on every retailer at regular and frequent intervals. Through the expert knowledge and cooperation which he is trained to bring to the retailers he makes a definite contribution to the retailers' welfare and success. At the same time the great and wasteful duplication of effort prevalent before the several companies were merged has been eliminated.

The food industry furnishes another example of just how definitely and extensively chain competition has resulted in the elimination of waste. In the minds of many the high cost of distribution has been definitely associated with the wholesaling function. The so-called middleman has symbolized particularly in the minds of the consumer all that stood for wastefulness, profiteering, parasitical existence. However, many functions actually performed by wholesalers cannot be eliminated.

Recent years have witnessed the development of so-called voluntary chains. These were sponsored by wholesalers who realized that in order to stay in business they would have to function more economically, and to accomplish this they must to a certain extent control their own market. So they proceeded to organize their retail customers into closely cooperating groups. A year ago there were 273 chain-store systems in existence sponsored by wholesalers and they had a membership of 34,311 stores, each owned by an individual who, however, subscribed to the various methods of cooperative functioning which were found desirable as an effective means for combating centrally owned chain-store competition.

Having in mind also the need for reducing wholesaling and warehousing functions to the minimum if chain competition was to be met, 18,000 other independent retailers in various territories organized a total of 103 wholesale organizations. These they as retailers own. They are operated strictly on a cost basis, thus enabling the retailers to obtain much of the merchandise sold by them through controlled wholesale warehouses at lowest possible cost.

While comparative records cannot be quoted, the success of these efforts may be judged from the fact that the movement is still growing. It appears that retail stores operating under the voluntary chain system are able to compete successfully with the centrally owned chains.

It is becoming continually more evident that wholesalers and retailers of the type that has come into being under the lash of chain competition have gradually made their competition so effective that chain systems, their original antagonists, are being forced to adjust their policies in order to maintain their position.

Combination food stores have taken the place of just plain grocery stores. Where up to five years ago the Great Atlantic & Pacific Tea Co. sold only groceries, it has today over 4,000 combination markets where in addition to groceries, they sell also vegetables, meats, fruits, candies, tobacco, and other goods. That company appears to be definitely committed to a policy of enlarging existing stores in good locations to convert them into combination markets. The importance of this fact is better understood when it is realized that the first year it sold meats, in 1925, that company used 4,200 carloads of meats, while in 1930 it absorbed 110,000 carloads—an increase of 105,800 carloads, or 2619 per cent. The same tendency toward larger units, greater concentration of sales effort, and widening of markets through increasing number of items in a line is evident in the present policy of other chain systems.

The Consumer

All factors involved in the distribution of foods lead eventually to the consumer, and therefore in the consumer we must recognize the most powerful, most uncompromising single influence. However, the demands of the consumer are extremely variable. It is not merely a case where they are not measurable by any national standard but they are changing constantly and sometimes with lightning rapidity.

Not many years ago the meat packers found liver so comparatively unpopular

that it might have been classified in the vernacular of the day as "a drug *on* the market." The medical profession discovered that liver possessed some important medicinal qualities and this promptly raised its status until now liver might be classified almost as a "drug with a market," for it sells at so-called "drug-store" prices. In some sections calves' liver, for instance, has brought as high as one dollar per pound at retail.

Canners have found that in recent years canned tomatoes were not selling as readily as expected. Southern growers were taking advantage of quicker express and even airplane transportation and successfully invaded Northern markets with supplies of fresh tomatoes during the winter months. But while the fickle consumer bought more fresh tomatoes during the off-season, he really was not turning from canned tomatoes but merely from the form in which tomatoes were being provided. Tomato juice and the tomato cocktail were gaining popularity, and production of these forms of canned or bottled tomato beverage jumped 628 per cent in just one season, from 98,000 cases in 1929 to 740,000 cases in 1930 and are still gaining with astounding rapidity.

The recent history of the food industry provides numerous other examples of the rapidity with which consumer demand may cease or change, and it is therefore evident that manufacturers require more than casual knowledge of prevailing trends and possible markets, it their product is to enjoy satisfactory and profitable distribution.

Where Does the Food Manufacturer Stand and What of the Future?

In the foregoing I have sketched briefly some of the most significant changes and trends that have occurred in the distribution of foods in recent years. I have also traced some of the influences that contributed to those changes and directed new trends. The question that arises quite naturally is, "How can the food manufacturer profit most from this summary of changes and trends?"

Obviously, this question can be answered here only in the most general terms, because the individual status of practically every food manufacturer is to a greater or lesser degree different from that of any other. Factors such as the financial structure of a concern, the type of product, research facilities, efficiency of production, present advertising and marketing policies, possible markets for the product, etc., have to be definitely known before the case of individual manufacturers can be adequately analyzed.

In the broadest sense food manufacturers have today available the most efficient and economical channels of distribution in the history of the industry.

Transportation of every type presents unprecedented facilities for the rapid, safe and economical transfer of goods.

Surviving wholesalers are offering a steadily improving service for the economical warehousing, distributing, and merchandising of products.

Food brokers and commission men in increasing measure recognize that they must perform some indispensable function of financing or selling in order to maintain their position.

The type of retail outlets through which food products reach the consumer is steadily improving; and independent, chain, and voluntary chain stores are prepared to provide manufacturers with the most effective retail selling and merchandising service in the history of the industry.

The food manufacturer of today, however, has at the end of his system of distribution the most intelligent, best informed, most changeable supersensitive consumer in history.

It follows that the food manufacturer must keep himself continually informed on the changing demands of the consumer, so that the product itself, its size, contents, and style of package, if any, may be more accurately tuned to prevailing and prospective future demand.

The buying habits of the consumer must be studied so as to provide the product as it is wanted and in the largest possible number of those places where the consumer expects to find it.

Then the manufacturer must study available channels of distribution to determine which provides the easiest, most direct, and most economical flow of his particular goods from his factory to the retailers from whom the consumer prefers to buy.

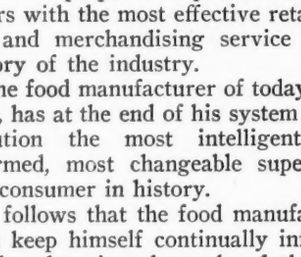
It must also be remembered that available channels of distribution change and that new agencies of distribution may become available through which greater efficiency and economy may be achieved.

Market Studies

Obviously underlying every procedure related to distribution must be a more than casual study of the market for the product. A manufacturer should know the approximate total national consumption of his various products as well as the approximate volume of production capacity that is in the field. No other industry has as many figures on this subject available at the various departments of the United States Government as has the food industry. Based on available statistics manufacturers are able to determine with considerable accuracy what percentage of total production capacity they represent. There also are available reliable forecasts of probable consumption of many food products.

It follows that a manufacturer operating in an industry that is at present overcapacitated has the choice of two policies: He can push his own production and capacity and hope that through available channels of distribution he will be able to sell all his output at a price that at the end of the year may show a profit, but in so doing take the chance of having to sacrifice part of the output and possibly produce red-ink figures for the total year's operation. Or, he can adjust his production schedule to cover approximately the same percentage of anticipated consumption that his capacity represents in the total production capacity of the industry and be reasonably sure that he can sell at a profit all that he is going to make.

This latter procedure, based on a continuously maintained study of markets, of trends in distribution, and of consumer demand is most likely to produce profits in the food industry.



What the Chain Store Does for the Food Manufacturer

By ALBERT H. MORRILL
President, Kroger Grocery & Baking Co.
President, Piggly-Wiggly Corp.
President, National Chain Store Association

IN THE early days of the chains, which was not so very long ago, chain operators quickly discovered the secrets of growth: A conveniently located store, a clean and attractive place to do business, prompt and courteous service, wanted merchandise, value for the prices asked.

By applying these simple elements as rapidly as possible to their operations, many chains grew swiftly. First, one store, then three, then a dozen, then many more. That is the history of all of today's great chains.

It is important to note that the chains did not begin with buying power. They started from the single store and developed for some time before they could be said to possess that supposedly all-powerful asset. The prime motivating power behind this early growth, without benefit of buying power, was *convenience for the customer.* And that is today, as then, the only permanent asset a retail store can hope to have.

We mean, of course, convenience in its broadest terms. Convenience in location, in layout of store, in display of merchandise, in always having the merchandise desired by the great majority of customers, in meeting every possible preference of the customer-group. The early chains, we may suppose, did not think this out completely. Rather, they almost stumbled onto it. But they soon found it to be the only sure profit road.

If a manufacturer has this same broad aim clearly defined for his business, and if he is making an effort to set up the organization machinery that will help him in a definite, concrete way to realize this aim, then his interests are basically identical with those of the chain, and the chain can do much for him. This fundamental unity of interest is important enough to warrant more detailed discussion; but, first, let us examine briefly a few of the immediate aids which the chain store can give to the manufacturer.

It is obvious that the chain offers the manufacturer a volume purchase which comes as a result of one selling job rather than of many. Assuredly, the costs of selling are less, and assuredly the presence of that manufacturer's product on the shelves of a chain of good stores favorably regarded by a large number of consumer-buyers is a form of advertising of some value. These things, so obvious that they are sometimes forgotten, must be mentioned here to give a complete picture of what the chain store does.

Let us look at another service which the chain can perform for a progressive manufacturer with a good product—a product that gives value received to the consumer. The product qualification is made distinctly because the correctly managed chain can and should do nothing for a manufacturer who does not foster the confidence of users, both in the product and in the store where the product is purchased.

This manufacturer, let us say, has a product which he knows, by test, meets with consumer favor and builds repeat sales in every market entered. Yet there are certain territories where, despite supposedly adequate "coverage," his product has not made the expected progress with possible users. Say, then, that he arranges with a chain which is strong in that territory, whether that chain is national, sectional or local, to promote his product vigorously for a certain period of time as a part of its regular store promotion. What happens? Experience has shown that this manufacturer usually reports unusual and very definite results.

Now "coverage" and "customer confidence" are favorite words with many periodicals and other advertising media, although they seem to use "duplication" almost as freely. The well-operated chain, the chain that has shown itself scrupulous and alert in the interests of its customer group, has a specific buying "coverage" and customer confidence that is unequaled anywhere. Advertising and distribution are combined in one act, powerfully strengthened by both factors of customer preference and habits.

Important as is such individual cooperation between manufacturers and distributors in individual situations, it does not represent, from a broader point of view, the chain's chief service to production, which undoubtedly is the quick and accurate check on the quantity and character of consumption.

Producers have suffered for years from the "time lag" between point of production and point of sale, the length of time which always elapsed between the change in demand and the time that orders from secondary distributors actually reflected that change correctly. Producers have suffered particularly at times when the character of demand underwent sudden changes. At other times there was not so much difficulty, but whenever demand veered at all sharply, there were difficulties all along the line, with secondary distributors and retailers failing to interpret demand correctly in their orders, building up dead stocks for themselves, and giving a totally incorrect picture to the producer.

When the chain came along with improved operation of retail units based upon the stocking of fast-moving merchandise, and with these units set down in many different localities, it provided an immediate cross-section of current demand for a city, for a region, or for a fairly large sector. And it provided this cross-section in terms of sales rather than estimates.

A variation in the sales of one, two, or three stores might be traced to numerous localized causes, but a variation in sales for several hundred stores can mean only one of two things: Either competition has suddenly cut in or consumer demand has definitely changed. The chains' business is and must be to find out which, and to find out as soon as possible. All sorts of complex investigations and surveys have failed to produce an index of consumer demand that can approach, in accuracy and speed, the trend of actual sales in a

group of geographically diverse but individually similar retail stores.

Today, when there are much more rapid shifts in consumer demand than ever before, this accuracy and speed are of first importance to both distributors and producers. Certain branches of the food industry in the past five years, and even in the past two, have provided striking demonstrations of this fact.

Under present conditions, the chain that is going to show a profit must change when demand changes. It has no choice. It must sell whatever will be purchased. The manufacturer is faced with the same necessity. To protect his capital investment, he may find it necessary to modify his product, to change its looks, the way it is packed, its grade, a dozen other factors; or he may find it profitable to change the essential nature of the product entirely, or to add new products.

At any rate, it has now become most important for the producer to get the consumer's viewpoint regularly and to make it the dominant force in his merchandising. This is especially important for him, experience has shown, if he is manufacturing a product which has apparently been little affected by demand changes in the past.

In the next few years we may confidently expect to see more and more cooperation between distributors and producers in studying demand jointly and in arranging to meet it correctly and economically.

The chain can pass back to the manufacturer information on the trend of the consumer market and on its merchandising requirements which will be precise, constructive, and extremely helpful in the profitable adjustment of operations. It can hardly be expected to take the sole initiative in this new type of cooperation, but it can be expected to cooperate.

Various chains are now manufacturing certain products for themselves. It is not to be supposed that they undertook these additional investments without a feeling of the absolute necessity for doing so. In each case the existent manufacturing facilities of the country were not adequately serving the consumer market, from either the standpoint of quality or economy, or both. If we will study the products themselves, exactly as they are presented to the public in retail stores, we can easily demonstrate this.

The chain has discovered that no product can or will survive if it does not consistently fulfill the consumer's idea of quality and value. No matter what other considerations may be urged, the effort to do that thing is the overwhelming and specific reason for the manufacturing of certain products by the chain. Wherever the producer is satisfactorily furnishing these products there is no tendency or inclination for the chain to burden itself with facilities which, at best, might be only a duplication.

If a manufacturer has the merchandising slant, if he has looked around enough to know that the biggest producing successes of the past decade have all been merchandising successes, and if he is interested in creating and maintaining a product that meets consumer needs satisfactorily and will continue to merit consumer favor because it gives "value received," then any chain is interested in that manufacturer.

Let us emphasize the importance of giving "value received" as a foundation of successful long-term merchandising. We are all familiar with products that have required high-pressure artificial stimulation to retain consumer interest. When pressure was relaxed, demand dropped sharply. A product that meets consumer needs and actually has the price value is certainly much less likely to experience such failures.

We do not deny the need for stimulation of vigorous salesmanship through every effective channel. Consumers are slow as a class to move in any direction. Stimulation is welcome when products sold meet consumers' needs more satisfactorily and economically than they have been met before.

But we do deny the value of artificial stimulation based 95 per cent on promotion and 5 per cent on value and appropriateness to actual customer needs.

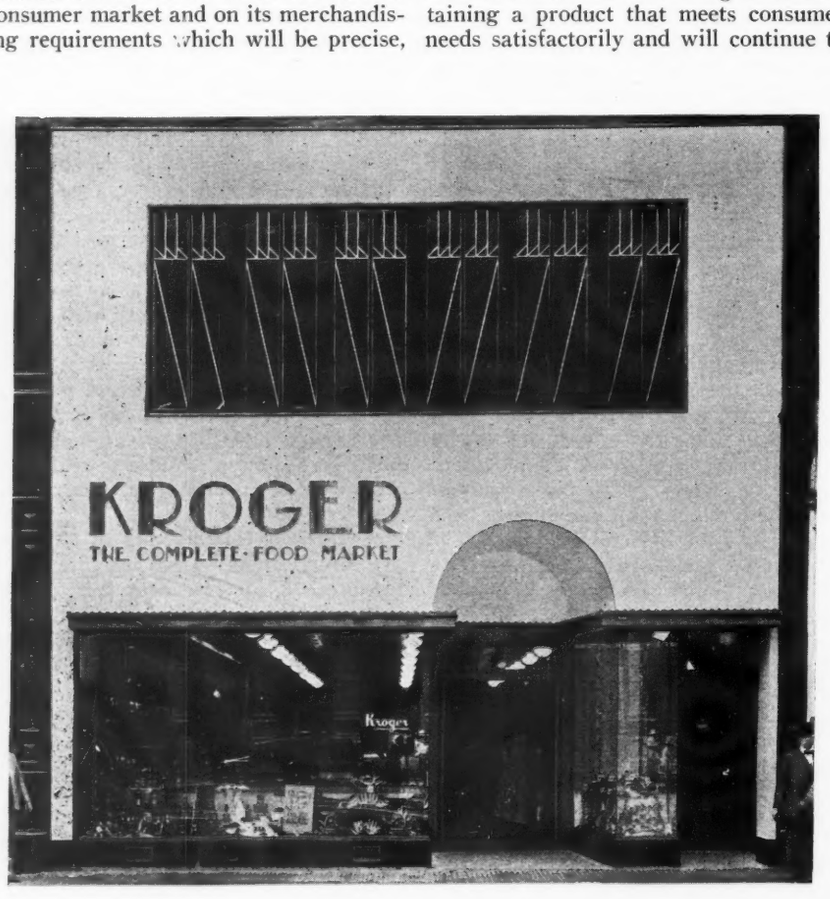
It will be noticed that in this discussion of what the chain store does for the manufacturer we have not said that it gives him automatic distribution. We have said that it gives him a volume purchase with a single sales effort, but we have not claimed that the chain, or anyone else, can "give distribution."

No distribution is automatic. Distribution through a chain is "automatic" only in so far as the product is one which consumers will recognize readily as necessary or desirable and will buy with only the everyday promotion given in the course of the chain's normal operation. If very few products fall within that classification, that is because very few products ever approach the utopia of "automatic distribution."

The events of the past two years have focused our attention on the present and future of mass production. Mass production achieved startling results in lowered costs, but there is a limit to consuming power which is set by many economic forces not within the control of either producers or distributors.

Neither the mass producer nor mass distributor is independent of the other. There is no such thing as an independent store. As stores they are all the same, whether one or a thousand are under the same ownership. The distributor and the producer alike are dependent on the rate and character of consuming power. Never was this as apparent as at the present.

The prime function of the so-called mass distributor is not to give any producer distribution. He can't do it if he would. His function is simply to meet whatever consumer demand exists, and to meet it as accurately, as promptly, and as economically as possible. In doing this, he vitally needs and can profit from the cooperation of manufacturers who are trying to do the same thing. And those manufacturers will unquestionably find that the profit is mutual.



Where Are the Voluntary Chains Going?

By GORDON C. CORBALEY
President, American Institute of Food Distribution, Inc.
New York, N. Y.

Underwood & Underwood Studios

WHAT the family of tomorrow will want to eat, the character of the commodities, or the size of the portions, I do not know, but to whatever Mrs. Housewife may want central management of distribution will give its attention. It will then organize retail services so that she will devote a minimum of her time to selecting attractive foods for her family. In all probability, this means that the trend of the flow of retail foods through the channels of distribution will be increasingly through combination stores, where the housewife can examine assortments which represent all kinds of food, where she can select the individual items, the sizes of portions and the forms of preparation best fitted for her needs.

Under such competition you may ask, "What will happen to the established brand in competition with the brands sponsored by distributors?" The answer depends largely on the intelligence in management exhibited by those controlling the preparing, packaging, and merchandising of the brands now widely established or of such brands as may hereafter be put before the public. The position of the packer who originates merchandise gives him the opportunity to send it through the channels of distribution to the consumer under his own brand, provided he is able to work in such a relationship with the distributor that the latter will feel that it is to his own selfish interest to handle that packer's brands.

With the growing intensity of competition for consumer loyalty, distributors are interested in handling brands that cannot be offered by immediate competitors. This is especially important with items where the housewife is fussy about quality and has difficulty in judging such items in the retail store as meat, butter, and coffee.

Merchandising management in chain groups may be expected to determine what these items are and then to plan the individuality of service, either in the store, or under brands, or by both, that will hold the loyalty of the desired group of consumers. Regarding the thousands of other items, however, where such individuality is not important, there will be only one answer: "What does the distributor think is to his own best interest?"

In approaching that subject the manufacturer has a distinct advantage, for the distributor will increasingly recognize the importance of offering what the consumer wishes to buy. That means continuing of established brands unless a reason is found in the quality, price, or service that makes other brands seem more desirable. It is obviously advantageous to all to hold the number of brands to a minimum and to speed the flow of those brands so that they may be delivered to the consumer at the lowest possible price and in the form and style best adapted to the demands to be served.

On the theory that enlarged executive viewpoint means longer range in vision, we may expect that manufacturers and chain distributors will learn that they have a common interest in working together on a basis where each will make a reasonable wage for his services, and that this tendency will be seriously disturbed only where the individual factors involved may attempt to force a larger wage than the others are willing to concede to them.

More than three years ago the Food Institute advised its members that a clearly defined evolution was taking shape among the independent handlers of food products and published its first study of this new movement under the title "The Voluntary Chains." In April, 1929, the preliminary analysis defined a voluntary chain as "a group of retailers (each of whom owns and operates his own store), either associated with a wholesale grocer or working cooperatively, organized to carry on such joint merchandising activities and to unite wholesale and retail functions under such control as will enable the participating independents to meet more effectively the competition of centrally owned chain systems."

Since that time several additional publications have been issued, defining the successive steps in the growth of a conviction that the term "voluntary chain" should not be applied to any single one of the several types of organizations but that it should be a descriptive term broadly covering all the phases of an evolution in the relationship among independent distributors.

In the first months, our broad classification, and its title were frequently challenged. Each type of organization felt that it was making the one approach to the distribution problem that would be able to save independent retailers. Many participants were so bitter against the change in competition which was being forced on them by the grocery chains that they did not like to have the word "chains" applied to their activities in any manner whatsoever. Each month, however, the position of the Food Institute has been so fully substantiated that manufacturers, brokers, wholesalers, and retailers are now being generally awakened to a realization that the continued success of chain merchandising is forcing a rearrangement of their individual jobs and collective relationship.

No matter how unpleasant to our individual ambitions such an awakening may be, it is becoming plain that the competitive flow of goods between production and consumption is no longer to be the haphazard bargaining of a generation ago. To get the proper perspective, we must recognize, of course, that changes are being forced by competitive necessity. Cooperative understanding between independent factors is taking its present form because the different elements have no choice other than to adjust their collective operations to an approximate parallel with those of the centrally owned chains. Control of the volume of food production at the point of retail delivery is necessary because we have so great a capacity for produc-

ing food that production will hereafter be regulated by what can be moved into consumption.

When the chain grocer had progressed to the point where his supply deliveries were largely concentrated into one wholesale service, he brought into food distribution certain new cost standards which could not be disregarded by the retailers who were competing with his chain stores. This did not mean that all competition was immediately forced down to those levels by the ability of the chain to handle dry groceries at a cost of 4 per cent or less for the central buying, warehousing, delivery to retail stores and other services which we include in the function of wholesaling. Convenience of contact, established buying habits, quality standards, and the human tendency to continue existing relationships prevents such a shift from taking place rapidly anywhere.

But the cost levels which are made possible by such centralized control of the wholesale services are a continuing influence, steadily forcing the mass of grocery distribution toward competitive levels, bringing handling charges and retail prices on staples down to approximate parity with the chain. When competition among chain systems and the aroused independents became so intense that the progressive cutting of prices made difficult the continuation of small stores with their limited assortment of staples, chain management then started enlarging into combination stores with diversified stocks. This move was designed to attract daily shopping and to supply the volume necessary to carry advertising and other overhead, a move which has gained momentum during the depression.

Excessive offerings of commodities and services raised the cost of distribution to a point where it was possible for the original chains to run a thin flow of standardized commodities down through the center of food distribution at a cost less than the burden carried by the great body of duplicated lines and services.

Then the simplifying process among the hundreds of thousands of independents started on the good old formula of each man trying to get an advantage for himself. Packers and manufacturers made special contracts, imposing upon their distributors the responsibility for speeding the flow of that manufacturer's output through to consumption. At the other end of the line, independent retailers formed buying groups, because they wanted mass power in dealing with wholesalers and manufacturers. In the intermediate position the wholesale grocer signed exclusive contracts with his preferred retailers by which he controlled their supply service and represented them in dealing with manufacturers.

In each case the approach of the individual was a selfish one. Manufacturers hoped for a greater profit from the savings in cost of distribution. Retailers hoped to obtain some of the margin that had been going to the wholesaler and manufacturer. And the wholesaler hoped to control the buying of the retailer at less cost to himself and under conditions where he could exact a greater margin from the manufacturer.

Competitive necessity, however, has broken down individual effort to gain advantage at the expense of others. Under experience it has been demonstrated that the individual advantage which one might gain was of very little value unless the competitive position of the entire service—of manufacturers, wholesalers, and retailers, all working together—was maintained in the retail store, so that the joint relationship attracted consumers by prices and the other services that secure business today.

Progress toward such community of relationship has been slow and difficult. In the beginning each factor—the manufacturer, wholesaler, and retailer—wanted to change the others over in a way to help his own business, but the resistless course of competition was operating so openly that executives realized what conditions they had to face. As a result definite evolution in relationship has been progressing steadily toward a harmonizing viewpoint ever since the April, 1929, report of the Institute. The evolution involved:

1. Reducing the cost of wholesale services.

2. Improving the retail approach to the consumer.

3. Enlisting the manufacturers so that all groups can join in a reasonable division of duties in competing for the consumer's dollar.

The survey of April, 1929, attempted to do no more than classify all the retailers and wholesale sponsored groups in a general movement described as the voluntary chain evolution. The staff estimated the existence of about 375 groups claiming a total membership of 50,000 retail stores. Later surveys showed that the number of groups was approximately correct, but that the organizers were several thousands high in their estimates of the number of retail members. The book printed in January, 1930, classified these groups into types and located 421 organizations with an estimated membership of 54,797.

This aroused such trade interest that Prof. Pelz, who conducted the investigation, started rebuilding the entire record to trace the evolutionary progress of the three types of voluntary chain organizations, their methods for controlling joint relationships, and their progress to better merchandising methods. In August, 1930, our report tabulated 551 organizations with 59,640 retail stores, of which 175 were cooperative groups of retailers with 7,253 members; 103 were other groups of such retailers who had progressed to where they owned central warehouses serving 18,076 members; and 273 organizations under the leadership of wholesale grocers which enumerated 34,311 members. No complete rechecking has since been attempted, but each week our records are revised to show changes in organizations and their methods.

On Dec. 1, 1930, there were 471 live files from the earlier list of 551 who appeared as still doing business, with membership among these survivors advanced to 58,976. In the past twelve months there have been added to the records 161 new voluntary chain groups with 11,793 retail stores. Today the files show a total of 632 voluntary chains with 70,769 members: 169 cooperative groups of retailers with 6,573 members; 125 organizations of retailers operating central warehouses with 21,642 members; and 338 chains built around existing wholesale grocers with 42,549 members.

In a recheck now being made to locate every voluntary chain association and to determine the methods employed to gain better cooperation and more efficient results, it is probable that the Food Institute will list more than 700 local organizations with 80,000 participating retail food stores.

To appraise fairly the results being gained from these groupings, we must bear in mind that no voluntary relationship can operate with the automatic regularity of a centrally owned and controlled organization. These men have been driven by necessity into joint relationship and, with continuing contact and the further pressure of necessity, are gaining in harmony of action and efficiency of cooperation.

The purpose of the Institute is to speed a sound evolution by gathering the facts regarding what is happening, to make cross-sections to determine what these facts mean, and then to place the record before the participating manufacturers, wholesalers, and retailers. From this service it is hoped that they will guide their operations with greater intelligence and thus speed the arrival at approximate stability in methods.

In this work the American Institute of Food Distribution is supported by membership funds from manufacturers, canners, packers, brokers, wholesale grocers, voluntary chains, centrally owned chains, and by retailers—by men interested in promoting group intelligence and especially interested in securing for their own executives those facts which are of value to individual operations.

In asking the question, "Where is all this reorganization of voluntary relationship leading to?" one may possibly believe, as the Food Institute originally believed, that the ultimate outcome will be community of ownership between wholesale and retail services. After

(Continued on page 18)

Adapting Wholesaling To a New Order

By HENRY KING
President, King, Dobbs & Co.
Chattanooga, Tenn.

UNTIL recently, business has put all emphasis on production cost, mass production, and other production problems. However, the continuous cry about the high cost of distribution and the recent statement made by Dr. Julius Klein, Assistant Secretary of Commerce, based on the Census of Distribution, that distribution losses amounted to $400 to $500 annually for each of the 25,000,000 families in the United States, indicates that the next decade will witness sweeping and rapid-fire changes in distribution methods.

The depression which swooped down upon us two years ago, and resulted in the slowing down of business, will at least have had one good effect in that it has given business men an opportunity to make a study of the fundamentals and the problem of adjusting their businesses to modern conditions.

This slowing down and starting over —probably learning over is a better way to express it—will not be confined to the distribution business but will reach all branches of business activity from that of growing peanuts to that of operating railroads.

The evolution of the wholesale grocery business and other forms of distribution can be traced with some degree of accuracy but it is hazardous to attempt to forecast future methods. Therefore, the following comment is submitted merely as a contribution to an exchange of views, based on observation and experiences between those who are giving serious thought to the situation.

Looking back thirty to thirty-five years, one learns that there were located in cities of 100,000 to 150,000 population an average of ten to twelve wholesale grocery concerns with capital investments of from half a million to a million dollars each, which did business within a radius of 150 to 300 miles.

These wholesale grocers were more entitled to the classification of "merchants" than has been the case in more recent years. Food products were at that time largely marketed in bulk form and the wholesaler selected, bought, and sold merchandise based on grade, type, and quality. His salesmen were required to carry large sample cases and sell this merchandise according to grade, type, and quality. The wholesalers at that time were among the wealthiest and leading citizens of the community, as at that period our country was more commercial than industrial.

A few years later came the interior wholesaler, referred to at times as the "corn field jobber," and one or more such concerns were located in practically all towns of 3,000 population and up. This was an economic move, but tended to restrict the territory of the wholesaler located in the larger cities, and as time went along most everyone in this line found it necessary to transact business in his own back yard, but not without the keenest of local competition.

During the time of these changes, the chain-store systems in an aggressive though seemingly imperceptible way, so far as the wholesale grocers were concerned, stepped in and took over a steadily growing percentage of the food business.

Paralleling the growing importance of chains, the sale of food products changed from the bulk form to package form and a period of extensive and intensive advertising of brands, trademarks, and specialties began. Even staple food products were marketed as specialties through intensive advertising. The wholesale dealer soon found himself getting away from buying and selling merchandise on grade, type, and quality; instead he was merely taking orders and distributing brands, trademarks, and so-called specialties, sometimes at terms dictated by the manufacturer.

The chain systems were building business to a considerable extent on price and indulged extensively in the use of many of these well-known advertised and trademarked commodities as "price bait." This was done to bring customers into their stores and to sell other merchandise, much of it packed under their own brands and labels, on a basis that would bring a profit.

Henry King

Photograph by Bachrach

Many individual retailers have followed these same tactics until now the total spread or margin between the manufacturer's price and the price paid by the consumer does not exceed 5 to 10 per cent on many of these items; while at the same time everyone from the manufacturer on down the line, who indulges in and encourages these practices, knows that it requires 20 per cent or more to cover the cost of distribution through the most economical channels.

During this era of change came also the cash-and-carry wholesale house, with a somewhat sensational beginning, operating on a plan which does not provide for a complete function in distribution. Such concerns generally handle only the most staple class of merchandise and serve mostly those customers whose time is not fully taken up by the selling end of their businesses.

This type of business, however, did tend to bring the regular service wholesalers to a realization that they must cut expenses and sell the individual retailer at a lower cost. Common-sense reasoning naturally leads to the conclusion that a well-conducted wholesale supply house can, in an orderly way, fill one hundred orders and deliver the same to one hundred different merchants more cheaply than the one hundred merchants can come to the wholesaler, in a rushed and pell-mell way, and get the same quantity of merchandise; unless these merchants are seriously and definitely to curtail the amount of attention that they can give to selling.

Manifestly, the turn of events in the food distribution field has tended to do away with former classifications, and the voluntary group system, which is being sponsored and widely supported by many alert wholesale and retail grocers and which is so different from any of the old systems, is entitled to a classification of its own.

The system itself is distinctly a form of "cooperative individualism." Through this system of operations the wholesaler and retailer have in a degree formed a partnership, but not by joining together their capital. Through their joint efforts they have made telling use of

their facilities during the past five or six years.

Both the wholesaler and retailer are being educated to look upon distribution as one function, but with two departments: the supply house and the retail store. They find that it is the duty of each to work to the end of lowering the combined cost of the two departments.

The voluntary group plan is built on mutual confidence and mutual interest in the affairs and success of both parties. Through this system mass buying, mass advertising, and mass selling have been made available to individual merchants.

The entire personnel of the voluntary system, including those engaged in both the wholesale and retail departments, seems to get more "kick" out of business than formerly, possibly because they are less selfish. Also, there is something of a fighting spirit prompting them to uphold the tradition of our country by affording opportunities for the small individual business man as against the centrally owned chains.

It requires courage and conviction to turn away from old customs and habits, and our company did not undertake the voluntary group plan until after two years of investigation and study. Finally, we concluded that the old system was practically obsolete and that our situation probably was a parallel one with that of the Studebaker Corp. when it turned from making wagons to the manufacture of automobiles. The result in that case speaks for itself.

As to our success under the system, it can be said that we have succeeded in the "hill-climbing" test—this during a period of adverse conditions, the birthday of the "volunteer stores system" being exactly that of the two-year-old depression.

In this race among varying types of food distributors, the chain systems are about holding their own. The recent report by the Harvard Bureau of Business Research held out these cautions:

> There are indications that in sections of the United States where grocery chains have been longest established the competition of chains with chains has contributed to increased operating expense ratios. The present tendency in the direction of offering additional services and carrying a wider variety of merchandise may cause additional increases in the expense rate unless offset by the economies resulting from larger sales per store.
>
> To venture a broad generalization, it seems to be characteristic of new types of distributive enterprise that in the first stage of their development they gain a foothold primarily by means of low prices; in the second stage they "trade up" the quality of the merchandise carried; and in the third stage they compete by offering services.

Then we have the rapidly growing voluntary group systems, which now have a total of retail outlets about equal to the chain systems. This group is composed of concerns which already control their necessary capital and have an established business, and since it is only necessary to go through a revamping process, its growth doubtless will continue in the future more rapidly than in the past.

All voluntary group plans are not successful any more than all of any other specific types of business are. After all, they are dependent upon the personnel and the management; but it is most apparent that well-conducted voluntary systems are gradually lowering the combined cost of the wholesale supply house and the retail store. This good work has scarcely begun and as the economic set-up is developed it is reasonable to conclude that the chain systems and the voluntary systems will at no distant date come to a common meeting ground with respect to operating cost.

The voluntary group system of merchandising is the result of the wholesaler and the retailer uniting, without any common capital or ownership complications, in a joint endeavor to move goods from manufacturer to consumer at a lower cost to themselves. The plan has entailed a noteworthy departure from practices and methods that were becoming ruinous to both the wholesaler and the retailer

While no one of these systems can make a claim to all advantages, the voluntary group system can claim one distinct advantage which the chains do not have in that the operators of the retail stores are owners of the business and citizens of the community, which circumstance is generally calculated to develop valuable qualities of character such as personality and individuality. With men capable of leadership at the heads of these organizations, an important step is to divert the course of the food business from a cut price, horse-jockeying kind of business to a higher standard of merchandising.

Such a course would, first, be to the interest of the consumer and, second, get distributors away from the ruinous practice of building business on price alone. To level out the food distribution business, there will be need for the cooperation of all interested parties from the manufacturer on down the line.

Much will be required of the manufacturers who, through various selling schemes, have encouraged and contributed to the "price bait" idea. It is only fair to mention here that many manufacturers of nationally advertised products have, through sound policies well executed, seen to it that their brands and trademarked products were not subjected to the "footballing" process. Commendation is due them because of their wisdom in protecting both their interest and that of the distributors.

There is much to be done in the field of distribution in order to meet the public's demand for economy and to preserve the free flow of goods through controlled and independent channels. To accomplish the best possible results, distributors know that they must have the full cooperation of the manufacturers.

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Where Are Voluntary Chains Going?

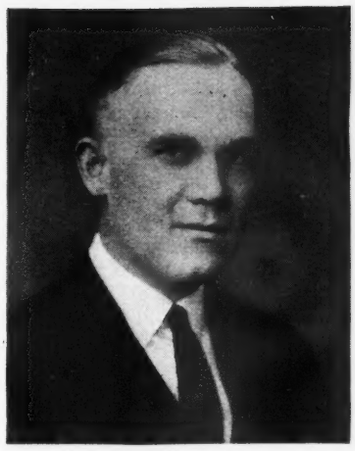
(Continued from page 16)

viewing the progress of chains for the past three years from the viewpoint of a businessman engaged in making his living out of food distribution, I have come to indorse the viewpoint of Prof. Pelz that the voluntary chain relationship is something distinctive.

The independents are being forced into a new theory of contacts with each other. The competition of tomorrow promises to be between centrally owned chains and voluntary groups, each seeking to attract maximum support from the consumer. With the passage of time it seems likely that the two types of organization will become more alike in their methods. The regular chains will place greater responsibility on individual employees, while the voluntary chains will have more regular habits governing their joint relationship and control.

Neither type will ever be 100 per cent efficient. The coordination of wide-flung methods, such as must be effected in the field of commodity distribution, is too scattered and too full of the human element to ever move with the precision of a factory. Also there will continue to be large outside movements of commodities, and numerous independents will be able to maintain their individual position, and tens of thousands of small stores will always remain on the economic edge, just as they have been since the beginning.

Executives will increase their study of problems of distribution and learn to apply the long-range intelligence which brought efficiency into manufacturing operations. Merchandising methods of these competing groups will constantly improve through increased attention to problems of management.



By **CHARLES B. JORDAN**
Vice-President, Jordan Stevens Co.
Minneapolis, Minn.

CHAIN-STORE PRICES ARE LOWER, several "chain vs. independent" surveys have revealed. Food manufacturers, realizing the effect of retail prices on sales volume, acted accordingly. "But how about the voluntary chains?" they have asked. Startling results of the survey Mr. Jordan describes give one answer to the much-discussed question:

Are Prices as Low In a Voluntary Chain?

MANUFACTURERS of foods are to a considerable extent at the mercy of the wholesalers and retailers through whom their products eventually reach the ultimate consumer. Their sales volume is definitely affected by the price at which their product is offered for sale.

The fact that chain-store systems have accounted for so large a share of the country's total volume of food sales is by many explained as being a result of their ability to sell more cheaply. Several independent research agencies have made price studies in different cities which without exception demonstrated that, disregarding possible differences in quantity, quality, or auxiliary services, the retail selling prices quoted by chain-store units averaged less than those of independent stores.

The voluntary chain has come into being as an agency of distribution that would combine the economies and benefits of group operation under the wholly owned chain with the advantage of independent ownership and its accompanying contribution of individuality and initiative. That this system is practical has been demonstrated by the fact that its popularity is steadily growing and that one such chain has now many thousand members representing annual sales volume of over $500,000,000. However, no comparative price studies are on record to show how selling prices under voluntary chain operation compare with those of wholly owned chain units.

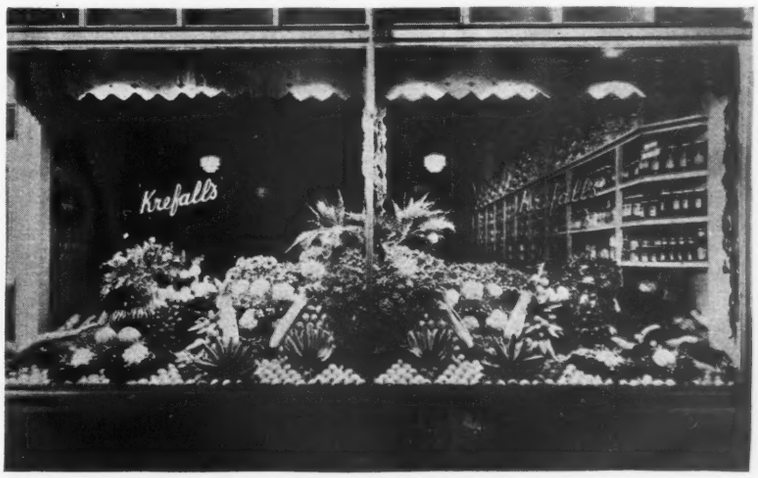
When our company interested itself in organizing such a cooperative group, commonly known as a voluntary chain, we felt that in so doing we assumed the responsibility of defending our customers against unjust accusations or possible extermination through unfair competition.

Many arguments have been advanced from time to time for the purpose of clarifying the position of the independent grocer or the member of a voluntary chain in the distribution set-up of the food industry. Chief among these arguments have been his ability to render a more individualized service than could be offered by local units of chains, his willingness to carry charge accounts, his delivery service, sometimes his willingness to carry greater varieties.

However, when the question of price has been raised, independent manufacturers, wholesalers, and retailers interested in the development of voluntary chains have had no answer that would adequately establish a basis for comparison, because organized studies of prices covered only the differences between units of wholly owned chain-store systems and independent retailers.

We must recognize that there are many grades of quality in almost every line of merchandise sold in food stores. There are also all kinds of stores. Some stores are obviously entitled to higher prices because of the quality of their merchandise, the service they render, and the specialized attention which their particular trade demands and expects to

Displays of fresh fruits and vegetables such as this draw customers into stores of the Jordan Stevens voluntary chain



pay for. Other stores which, because of their location or the class of trade to which they cater, find themselves in active competition with the cash-and-carry chain stores, must of course adjust themselves to be successful under such conditions.

Because price has been the hub around which most of the argument in favor of buying at wholly owned chain stores has revolved, and previous studies did not include the voluntary chain units, we decided to determine the facts. We felt that as sponsors of a voluntary chain we should know just how our operations as reflected in consumers' prices compared with those of wholly owned chain units.

For that purpose we launched a survey of our own and engaged a college-trained woman to conduct it. In her capacity as a housewife she had been buying groceries for her own family for years. This personal experience, together with her education and natural talent for observing things that others fail to see made her seem particularly well adapted for the job.

We prepared six long lists of groceries, one list for every day in the week. We included the well-known staples used so frequently as loss leaders; we included all kinds of fresh fruits and vegetables; and in fact almost every item used by any family could be found in one of those daily purchase lists.

Our shopper had careful instructions to buy groceries at two stores in each of several sections of the city. Each day's list was to be purchased first at the store of one of the members of our voluntary chain, then at the nearest chain store. She was to specify brands only when the list called for it; otherwise she was to ask merely for "a can of corn" or "a can of peas" and let the grocer serve her the kind he thought she ought to have.

Each afternoon when she appeared at our office with her duplicate assortments of groceries there awaited her a group of food experts armed with scales, knives, dishes, and spoons. Each item was carefully weighed, carefully examined, and if it was edible it was tasted. Finally the values were compared.

It should be emphasized once more that we were making this survey not for publication but to ascertain the facts for ourselves. In estimating the comparative values, then, there was no inducement for us to be prejudiced in favor of the things purchased at the independent store. There were times when if there was any question as to a comparative value we gave the chain store the benefit of the doubt.

The results were amazing! Each day 25 to 35 items were purchased from each of two stores. For the entire week, on all those purchases, the total difference in price between the chain stores and the independent stores in favor of the chain store was 4.33 per cent, but in comparing values we found a difference in favor of the independent store amounting to 0.915 per cent. Just to be fair, we called it an even break.

However, it must be remembered that each one of those independent grocery stores was prepared to give charge and delivery service at no extra cost and none of them had been notified in advance of our experiment. They gave the consumer a bigger dollar's worth than was obtainable at the chain stores where the cash-and-carry method prevails.

Leaving price out of it, the comparison of values was interesting. For instance, our shopper purchased a head of lettuce at the chain store for 15c. and one at the independent store for the same price. The head purchased at the chain store was untrimmed and weighed 8¼ oz. net. The head purchased at the other store was trimmed and weighed 13 oz. We gave the independent store the benefit of the extra weight and credited 8½c. to that store. On the same day our shopper paid the chain store 6c. for a loaf of unwrapped bread. She paid the independent grocer 10c. for a better bread in a wrapper, but we gave the chain store credit for 4c. better value.

On another day the chain store charged 49c. for a dozen eggs, as against 50c. paid at the independent store. We sent both lots away to be tested without revealing the identity of either. The chain store eggs came back to us marked "poor to fair; score, 57"; while those sold by the independent grocer were rated "fair to good; score, 68." We asked the expert for an estimate as to the difference in value, and when told 7c. gave the independent store credit for better value to the extent of 6c.

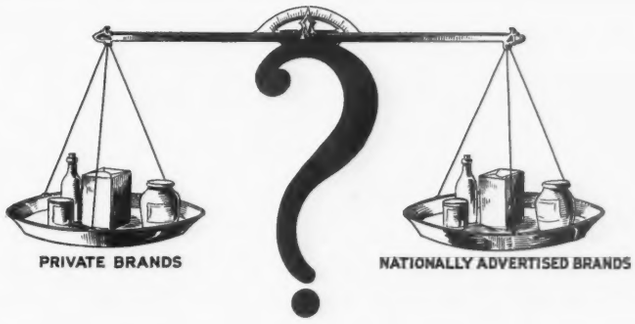
We feel that, all things taken into consideration, this private study demonstrated that the member stores of our voluntary chain group are operating just as efficiently and economically as any chain store, are selling at competitive prices, and in addition provide delivery and other services.

It is, probable, of course, that comparisons between prices quoted by wholly owned chain units and member stores of other voluntary chains may in some sections show lesser or greater differences. However, it is obvious that any comparative price studies are unfair and incomplete unless the factors of quality, weight, and package are taken into proper consideration.

Remodeled interior of one of the voluntary chain units shows a thorough understanding of modern retail selling methods

If he builds up a private brand business

The National Advertiser Competes With Himself



Yet can he afford to disregard this growing market?

M. M. Zimmerman, merchandising counselor, of New York City, and author of "The Challenge of Chain-Store Distribution," discusses this important and paradoxical situation

"SHOULD we enter the private label field?" How many times have I been asked that question in 1931 by food manufacturers of nationally advertised brands? And indeed it is a difficult question to answer, and an equally difficult decision for a manufacturer to make. Private labels constitute a most perplexing problem today for the national advertiser. His chief concern is whether the growth of private labels, so popularized by the declining commodity price market and the depression, which has made consumers "penny wise," is but a temporary affair; or whether the return of the country to normal prosperity will relegate private labels to the background, national brands then resuming their former popularity.

Another question many national advertisers are asking is, "If we do go after private label business, how will it affect our status?" Finally, will the temporary advantage they may gain in increased volume be offset by the possible future effect it may have against their national brands? In other words, when the national advertiser seeks private label business, is he entering into competition with himself?

There is no denying that private labels have made great strides in winning consumer acceptance. Never before in the history of food distribution have they developed such a remarkable sale in every section of the country. Such markets as St. Louis and Kansas City are known private label markets, where the sale of the private brand predominates. While the corporate chain, one of the first to exploit private brands, has been featuring its own labels for some time with moderate success, the independent trade with the entry of the voluntary chain movement has become the more aggressive exponent of private labels. With the organized merchandising methods the voluntary movement introduced, patterned along corporate chain principles of retailing, which includes newspaper advertising, handbills, window displays, and aggressive sales effort, the private label has thrived with these independent distributors to a point where both wholesaler and retailer claim they are no longer dependent upon the national brand. Jobbers, in particular, sponsoring voluntary organizations, feel that in the private label they see their salvation in protecting their much-needed profit, which they insist can no longer be made on national brands, due to the vicious price cutting to which national brands are now especially subjected. Furthermore, in their own labels they insist they have a weapon with which they can build up a permanent following among their independent retailers.

The success of the private label is traceable directly to bargain prices. Taking advantage of economic conditions, which have curtailed the purchasing power of millions of consumers, the exponents of private labels have been harping on low prices as the solution to the limited budget. This has proved successful. Consumers who formerly patronized nationally advertised brands, now, because of necessity, buy private labels at savings representing a wide differential between national and private brands, varying from 10 to 40 per cent. Here then, we have the situation which is prevalent throughout the country and is the reason why private labels are so successfully competing with national brands.

To illustrate more specifically the wide variance in price which exists, let me illustrate with a few products. The market price on national brand flour is around $5.60 per barrel. Private label flour, however, is being sold at as low as $3.25 per barrel. Of course, this private label flour does not compare in quality with the national brands, but the differential is so great that tonnage on private label flour has increased beyond normal proportions within the last few years. National advertisers who also must compete for this business, because they must keep their production capacity going, are in a real quandary, for this private label flour is not profitable at the present market price.

In the cereal market private label corn flakes are competing successfully with national brand corn flakes because of a price differential of 60c. per case. Private label corn flakes are being pur-

chased by jobbers at $1.90, as against $2.50 for the national brand. The jobber can sell his private label corn flakes at around $2.25 or $2.35 and still make a good profit, whereas today, due to competitive conditions, he cannot make any profit on the national corn flakes. Similarly, rolled oats can be purchased at 82½c. per case of private labels, as against $1.42 for the national brands.

Even soap is now entering the private label market to compete successfully with national soap brands. One of the important voluntaries is buying a national advertiser's leading national brand soap under his own label, which he retails at two cakes for 9c., making a good profit and competing against the same national advertiser's soap, which seils for 7c. per cake.

One can, therefore, readily understand why the problem is a complex one for the national advertiser. He sees the private label encroaching on his own brand. He is invited to participate in the business. Yet, if he takes the business he becomes his own competitor. This may be more pointedly illustrated with the case of a prominent national advertiser of long standing, whose product is a household name—who, sensing the trend of private labels some two years ago, approached some of the more important voluntary chains and has been supplying them with his standard product under private labels. One of the voluntaries has been exceptionally successful in creating a substantial sale for this manufacturer's private label product—so much so that it now represents 4 per cent of the manufacturer's total volume. "The nigger in the woodpile" here is that while the 4 per cent still represents but a small part of the national advertiser's volume, nevertheless, the voluntary chain has already made a decided impression on several of the advertiser's markets, to the extent that his sales on his national brands in these markets have decreased considerably, while the sale on the private label has increased in proportion. It clearly indicates that the manufacturer's private label has supplanted his own national brand in these markets. The voluntary chains and not the national advertisers own this market. The lesson one can draw from this case is that if within two years a voluntary, operating a limited number of markets, can absorb 4 per cent of a national advertiser's production, how much will it absorb within the next ten or fifteen years as the voluntary continues its program of expansion, and what percentage of the advertiser's business will be private labels and national brands?

In some cases when the national advertiser competes for private label business he will be asked to supply his quality product at a definite price. He will discover that it is impossible to take the business unless he wants it at a loss or he believes he absolutely needs the volume to keep production going. To illustrate such a case, let me give the experience of a national packer of one of the highest quality lines in the country. This packer also felt that he was overlooking the private label market for extra volume and approached one of the large national voluntary chains. He was asked if he would produce a special 10c. can of one of his products, of his standard quality, at a given price. The price was so low that he did not see how he could even consider it. But the volume business was so large that he decided to look into the possibilities of meeting the price. He spent considerable time trying to figure every conceivable short cut in production. He eliminated all sales and advertising expense, and when he got through he found that if he accepted the order it would involve so tremendous a loss to him that naturally he turned down the business.

It is, therefore, apparent that the path of private label business for the national advertisers of the quality lines is not entirely a rosy one. With so much forced selling; with much distress merchandise that has been thrown on the market; with small manufacturers, whose investment and overhead are comparatively insignificant, many of them opportunists, trusting to luck that they may make a profit on a sale, selling their products at cost or below cost, and with some who do not even know what their actual costs are, the private label market is a hazardous venture for the national advertiser who has his fixed operating and selling overhead. He is competing in a market where price is not stabilized and where as yet, no bottom has been reached.

As an illustration, it is the boast of one of the large voluntary chains in discussing the advantages of its organization to retail members, when trying to sell membership, that with its tremendous buying power it has become the headquarters for distress merchandise, which it is able to buy at its own prices. Since no quantity is too large, all members are thus able to participate in these profitable buys. It is this type of selling in the private label market which is responsible for much of the price demoralization.

Nevertheless, there are many national advertisers today packing private labels and apparently doing it on a profitable basis. But the most difficult hurdle confronting some is the price differential between the private label and the national brand, which may vary from 10 to 40 per cent. The national advertiser cannot always explain to the distributor's complete satisfaction the reason for this differential. The distributor usually singles out the advertiser's national sales organization, with its district offices located in every section of the country, manned by high-priced managers and specialty salesmen. He declares he does not wish to pay for the cost of maintaining this organization. Neither does he wish to pay for all the national advertising, which he feels is excessive and adds greatly to the high cost of the product. There is no denying some advertised products carry too high a sales cost, and such a manufacturer is up against it when he tries to justify his costs.

Furthermore, when an advertiser enters the private label business, and becomes his own competitor, he is automatically adding to the costs of his national brand. For, as his private label business increases he must expect his national volume to suffer. To maintain his national volume he will be compelled to increase his sales and advertising effort, which automatically will add to the cost of his advertised brand.

National advertisers, however, still believe that, because of present economic conditions, the private label is being used by distributors as a mere expediency and that with the return to normal conditions we shall see the passing of the private label to its former unimportant position.

From the careful analysis I have made of this subject, which has brought me in contact with distributors in many sections of the country, I believe we must recognize that the private label has made more than a mere gesture in achieving its present popularity, and its success can be attributed to more than just economic conditions. It is my contention that unless radical changes are made by national advertisers and unless they adopt a more definite and vigorous policy to protect the distributor's profit on their brands, private labels will continue an absorbing problem. In the final analysis, to pack or not to pack private labels is more a matter of what is the position of the advertiser's brand in his market today. How much distribution has he, how does his product compete in price, and has he readjusted his price so that his differential is not too great? If the advertiser does enjoy an excellent consumer demand in all the markets, if he is keeping pace with changing conditions and watches his production and distribution costs, so that they are in line with modern competition and his product is not sold at an excessive price, then there is really no great necessity that he enter into competition with himself by going after private label business.

Instead of giving serious thought to the private label business, advertisers would profit more if they gave the same thought to the protection of the distributor's profit. There is entirely too much profitless selling going on in the trade, and the real growth of private labels can be traced directly to this profitless selling. Let the national advertisers do their thinking along these lines. Let them find a solution for the profit problem, which is the most serious problem confronting the whole industry, and the private label question will solve itself.

Has Frozen-Food Marketing Failed?

"No!" says

RALPH G. COBURN

Executive Vice-President of General Foods Corp., who heads its frozen food activities.

1931 resulted disastrously for several highly touted developments in selling frozen foods. Those who expected to see food distribution revolutionized overnight are now asking if the whole thing isn't falling through. Mr. Coburn refutes such doubts in no uncertain terms. Properly operated, the frozen-food business has profits for maker and dealer, he maintains, and he goes on to show just what "proper operation" means.

EXPERIENCE has shown that perishable foods of high quality, attractively packaged, and quick-frozen scientifically to retain their original fresh properties, can acquire immediate and widespread public acceptance with but slight promotional effort, and that they can hold the popularity they thus achieve. Experience has shown also that perishable foods can be packaged and quick-frozen at costs which afford a profit margin to the producer, and can be distributed so as to permit a reasonable profit to the retailer.

Satisfying these two fundamental business requirements, it seems inevitable that the quick-frozen foods movement, opening a new industrial field, will undergo extensive expansion in the near future. Viewed from the standpoint of commercial development, only three years ago low-temperature freezing in the food industry was generally regarded as of little more than academic interest. In the laboratory it was faced with many unsolved or partially solved problems of food chemistry and engineering research. Outside the laboratory, in the fields of production and distribution, its development was confronted by many equally difficult problems.

In the solution of these problems, there was little precedent to guide pioneering effort. Yet in three years, with remarkable rapidity considering the nature of the undertaking, the quick-frozen foods movement has passed from the laboratory stage through the complex stages of production and distribution experiment, and has become an important integral part of the food industry.

Previous development activities are equally important in a review of low-temperature freezing, but its progress in 1931 represents probably its most significant advance because in the past twelve months quick-frozen foods have definitely proved their practicability. They have been tested in a marketing operation sufficiently comprehensive to establish their real commercial value in all phases of production and distribution. Moreover, accumulated production and merchandising experience has served to establish practices which, with modifications, seem to provide a basically sound procedure for future development of quick-frozen foods.

Since my knowledge of low-temperature freezing concerns principally the Birdseye process, my observations in this article must be confined to methods adopted and projected for developing Birdseye frosted foods.

First, from the production point of view, the quick-freezing of foods, in so far as the Birdseye plans for the future are concerned, will embrace the establishment of quick-freezing equipment in existing meat-packing plants, sea-foods-packing plants, and vegetable and fruit canneries. For purely seasonal operation there will be temporary installations of portable machinery capable of being moved to widely separated parts of the country at different seasons. Where fresh produce is available in sufficient quantities and varieties for year-round operation, it is probable that installations of quick-freezing equipment will be permanent.

It is believed that existing plant facilities will prove adequate for any required production volume of quick-frozen meats, sea foods, poultry, vegetables, and fruits. Meat-packing and sea-food-packing facilities already exist in hundreds of large and small plants in many parts of the country, and more than ample facilities for quick-freezing other perishable products exist in large numbers of canneries adjacent to their sources of supply.

Existing means of transportation have been found generally satisfactory.

The consumer package of frozen foods begins its step-by-step refrigerated journey as it enters the freezer

Packed in insulated fiberboard shipping containers, frozen foods can be shipped without refrigeration to points up to 24 hours distant without danger of thawing. Railroads and railway equipment manufacturers have already perfected rolling stock adequate for shipping quick-frozen foods across the continent.

A recent survey revealed that all important marketing centers in the United States have suitable facilities for warehousing the products at sub-freezing temperature, in volume sufficient to supply efficiently the distribution area served by the warehouse. An important sidelight on the warehousing phase of the quick-frozen foods movement is the fact that the warehouses can be economically utilized in place of branch distributing houses. From these warehouse distribution points, virtually every food store in the United States could be supplied with quick-frozen foods by truck shipment.

All down the line from the source of production through the channels of distribution to the retail store, existing facilities are adequate for national expansion. Improvements now under way and others unforeseen will no doubt be made in this relatively unexploited field which has so many untouched possibilities for further development.

However, the means at hand today have been proved equal to the jobs which quick-freezing has given them, and the future of low-temperature foods depends largely upon the most important step in the entire undertaking. This is the retailing side of the movement!

Quick-frozen foods are new and interesting commodities, entirely feasible and practicable. Their universal acceptance by the public is inevitable, but the rapidity of their popular growth will depend largely upon the maintenance of standard high-quality products. Their quality, in turn, will depend not only upon careful selection of products, proper methods of packaging and quick-freezing, and adequate means of shipping and warehousing but upon use of facilities for handling them in the retail store.

For this reason General Foods has felt that display and storage cabinets for retail dispensing of quick-frozen foods must conform to rigid requirements as to reliability. Several manufacturers of refrigeration and cabinet equipment are actively developing low-temperature store cases which are confidently expected to meet these high standards successfully. These requirements may be interpreted as the ability to maintain continuous operation at a maximum temperature of 10 deg. F. for month after month in the warmest and most humid summer weather.

At present the equipment of four manufacturers has been approved for handling quick-frozen foods in retail stores. Other satisfactory cabinets will be produced in the near future. In fact, it seems entirely probable that continued expansion of the quick-frozen foods movement will result in the production of satisfactory storage equipment by a majority of reputable manufacturers, just as all recognized automobile manufacturers have developed motor cars which give satisfactory service for years.

Insistence on use of approved and tested equipment is vital because experience has shown that only by utilizing satisfactory store cabinets can the best interests of the customer, the retailer and the producer be protected.

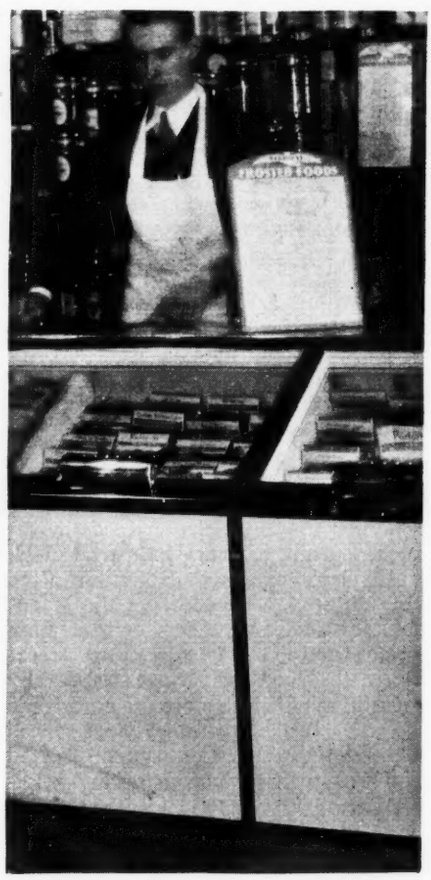
In my opinion, the significance of low-temperature freezing may be summarized by saying that it provides the long-sought means of selling perishable foods in packages.

This movement of foods into individual containers has been the greatest development in the history of the food industry. Packaged foods on the dealer's shelves, in the place where the public comes into closest contact with the machinery of food supply, are the ultimate results of scientific and merchandising progress in the food industry, reduced to the lowest common denominator of price and quality.

Great changes in the food store have already been brought about by the packaged foods principle applied to non-perishable and semi-perishable foods. I believe that quick-freezing affords the means of completing the metamorphosis of the food store by placing perishable foods in the packaged foods class. Experience has indicated that this condition will be brought about. The problems of production, storage, and transportation have been satisfactorily worked out. Adequate retail store equipment has been developed. Both the public and the store proprietors handling the foods are highly enthusiastic over them.

It follows, then, that in so far as the retailing of quick-frozen foods is concerned, methods will closely parallel the accepted procedure employed in dispensing packaged grocery staples.

Frozen foods meet with enthusiastic response at the grocery of F. Kilroy, Glen Rock, N. J.



Store-Door Delivery

Profitable Only for Perishable Products

By JOHN J. WOLF
Kraft-Phenix Cheese Corp.
Chicago, Ill.

THE auto truck method of distribution which maintains Kraft-Phenix products ready for sale in grocery stores and food stores in every well-populated section of the United States is much more than "just another method" of moving perishable and semi-perishable foods from a warehouse to a store. It is a distinct type of service by which perishable foods must be distributed, developed during the past ten or twelve years to bring to market products which did not have general or wide distribution under older methods. Its perfection and rapid progress has been along these lines rather than as a replacement or a supplanting of the old established methods of distribution for general grocery products.

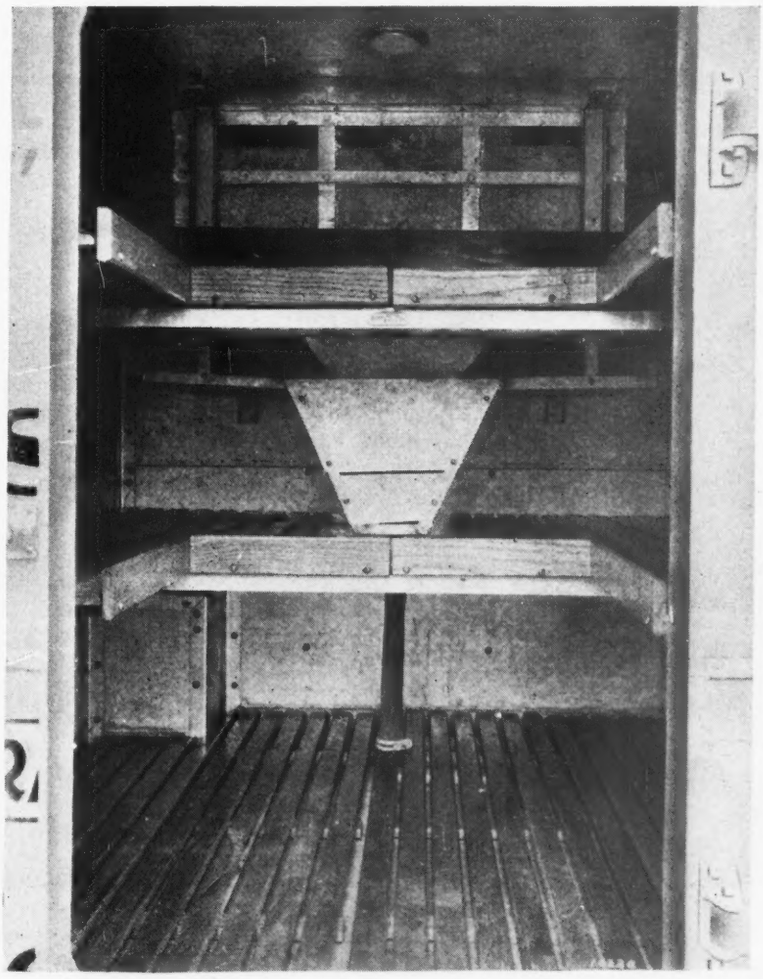
Shortly after the war, truck distribution, except for a few scattered markets, was confined entirely to the larger metropolitan areas. The cheese business, with its then limited varieties and styles, was being handled by jobbers, packers, and the like, more as a necessary evil than anything else. With these conditions holding, cheese was frequently distributed without profit, as a sideline rather than as a product which warranted thought, time, or effort.

During this period the retailer was buying and selling cheese in almost exactly the same way in which it had been sold when the first grocery store was opened back in the dark ages of history. Some grocers bought a year's requirements and took great delight in curing the cheese in their own cellars. Some bought from hand to mouth as they needed it, and if they were "out" at times, that was all right too. They sold half a pound or a larger quantity by merely cutting it off the larger piece and never knew whether they made a profit on it or not. Frequently shrinkage and loss through molding, drying out, and other limitations of bulk cheese, caused the dealer to handle cheese actually at a loss, although almost as frequently he did not realize that such was the case.

With the perfection of manufacturing methods which made possible the production of cheese in tins, cheese in 5-lb. loaves, ½-lb. packages, ¼-lb. packages, and sealed jars, the picture changed entirely. Packaged, branded cheese and cheese products could now be marketed on a national scale. Advertising, national and local, could be economically employed, not only to promote the sale of the branded product but to educate the American public to the wide adaptability of cheese as a staple to provide nutriment and flavor in great variety.

In building the truck system of distribution, we took as our first principle the fact that cheese is perishable, and must be handled as such from a distributing standpoint, before we could hope to attract additional interest from the consumer. We have also main-

Typical interior of a refrigerated truck used for store-door delivery of perishable products



tained that cheese properly handled in the grocery store builds not only a volume of cheese sales but a general grocery volume as well, and have proved to ourselves in no uncertain way that proper display of a wide variety of cheese attracts customers to any store in ever increasing numbers.

In every case the stopping of the truck of a Kraft-Phenix distributor before the door of a retail store constitutes something more than simply a delivery of Kraft-Phenix products. It represents a definite service to the retailer, which he can see definitely in his net profits.

It is our boast that every man on a truck distributing Kraft products is a trained cheese merchandiser. He takes an intelligent interest in building the cheese business and the cheese profits of his customers. He is taught to gage the capacity of a store accurately. It is his business to see that the needs of that store are adequately taken care of, that the retailer has enough of all products to supply him through the week, but not so much that he will have a big carry-over. It is his business to see that the turnover of the products that he sells is maintained at the highest possible level. It is up to him to see that the retailer understands and realizes what this service means to the consumer and to him in the way of constantly fresh products.

The truck salesman passes on to the retailer merchandising ideas that have been carefully worked out, tried, and proved to be successful. New display methods that bring increased sales are brought in with the delivery of cheese and mayonnaise. He helps the retailer make his displays—or makes the display himself—whether it be on the counter or in the refrigerated display case.

Mayonnaise and mayonnaise products —mayonnaise, French dressing, salad dressing, "Ham-N-aise," salad cream, and the like—are serviced to dealers in exactly the same manner and from the same truck as the cheese products. The same care in determining stock and placements, and the same type of sound merchandising ideas are given to the retailer with the delivery of the product.

Because of the effectiveness and dependability of our distribution, we are able to advertise Kraft mayonnaise as "kitchen-fresh" and to know that when we tell the consumer that the Kraft mayonnaise in the corner store is "kitchen fresh," we are stating a fact and not a wish.

Naturally, a distributing system as complete as is in effect for Kraft-Phenix today, went through many periods of trial and error. This was true in all phases of the operations from the equipment to the method of actual delivery.

At the present time distributors are concentrating largely on better equipment, with refrigerated bodies able to maintain temperatures all the year around of between 40 and 45 deg. F. Practically all principal distributors have their trucks designed and painted uniformly, so that their identity will be instantly recognized, and so that distributors may benefit from the prestige of the Kraft name built up by years of advertising.

Distributors are also coming to a better appreciation of the fact that their business is built for the distribution of perishable and semi-perishable products. They are beginning to know that there are certain products which have a rightful place in truck distribution and other products which do not, and that when their business branches out to other lines not rightfully belonging on the truck it will probably weaken and fail.

So general is this belief becoming that already Kraft-Phenix can see the day when distributors will clear their trucks of all merchandise not rightfully belonging there. The natural question which arises, What does belong there? cannot be answered in a general way. Each case would call for special consideration. Broadly speaking, however, it might be said that if a food product can be adequately and economically handled in any other way it should be kept out of truck distribution. In any event, that is as good a rule as any that has yet been formulated.

The distributor who decorates his trucks so as to take advantage of the national advertising of the manufacturer has an added sales aid

Can the Dairy Companies Cut Distribution Costs?

By THOMAS H. McINNERNEY
President, National Dairy Products Corp.
New York, N. Y.

RECENTLY there has been much talk about high distribution costs in connection with the delivery of milk and allied products from retail routes controlled by this and other large dairy companies. Any number of investigations have been started with the end in view of suggesting ways and means of cutting our distribution costs. In each case they have failed to show that these distributing costs could be lowered. Of course, these investigations have, in large measure, been undertaken by people who know very little about the distributing business; people who think that the spread between the cost to us of raw milk and the cost to the consumer for the bottled product is very large. They do not consider that this milk has gone through three or four distinct processes before it is put onto a milk wagon for final distribution and, further, they do not know that we have constantly attempted to reduce the cost of distributing a bottle of milk.

A saving of a ¼c. or ½c. a quart on the cost of delivering milk would mean a tremendous increase in earnings for the large dairy companies and, were it possible to secure a saving of anywhere from 1 to 2c. a quart, I am sure that not only this corporation but other large distributors would be willing to pay handsomely for the answer.

Many suggestions have been made which propose the combination of large units in the dairy industry, with the view in mind of eliminating double routes for the distribution of milk. These problems have been considered many times, and, because of the human limiting factors involved, have been discarded as being impossible. The human limitation of a man's strength is a large factor involved, whereas the factor which investigators consider to be the only outstanding one is the size of the wagon and the length of the route. We have many instances of wagons having been loaded to full capacity and serving only one block, whereas we have other routes where the wagons are loaded to capacity serving many blocks in areas less congested, of course, than those of the first case, but, nevertheless, full-load routes.

Where two wagons cover the same route it might appear that economies could be secured from combining these two routes, thereby eliminating one. But we must not forget that if these two routes were made into one the length of the resulting route would need to be halved and there would still be two wagons serving the same area. This is the case also where three wagons cover the same route, or where four cover the same route and have different load factors.

Conditions in different cities have, in large measure, to do with the cost of distribution. In New York, where the territory is relatively level but contains high buildings, such as apartment houses and apartment hotels, and the like, the length of a route is relatively short, but the man handling the route can climb only so many flights of stairs, due to the human strength involved. It further takes a certain length of time to serve a route, and if a rider is added to cut down the human labor exerted by a human driver, thereby eliminating hours the wagon might have to stay on the street, the cost of the total route is increased in some instances. Of course, this is a common means of attempting to reduce distributing costs through shortening the time it takes to deliver in certain routes. So much, therefore, for the human factor of delivering and the costs involved in attempting to shorten the time of delivery.

The maintenance of equipment is another very great factor which enters into the cost of distribution which many investigators have entirely overlooked. They think in some cases that the amount of equipment maintained to deliver certain routes is excessive, that different types of equipment could be used, that automobile trucks can be used instead of horse-drawn vehicles, and many other factors. Here again the conditions of a certain territory are the final factors which influence the use of certain types of equipment. In Pittsburgh, a two-horse hitch is used, due to hilly country and tiring routes. In certain Ohio towns automotive equipment is used, due to the facility of the driver in delivering at his various stops. In New York, a majority of the equipment is single-hitch horse-drawn vehicles, due to the peculiar operating conditions in this city. No standardized type of equipment has so far been devised which will reduce the total cost of distribution and can be used under all types of conditions experienced throughout our widespread territory.

One instance of economy secured in single-hitch and double-hitch wagon distribution is found in the maintenance of horses as a relief. Some years ago one spare horse was maintained for each five routes. Today, one spare horse in certain territories is maintained for every ten routes. This is evidence of our constant improvement in maintenance of equipment and it results directly in a reduction in total distributing cost. This example we cite can in nowise be called an average example, as the numbers of horses kept in reserve in different localities vary widely. This economy is not possible where automotive equipment is used, since the motive power for a piece of equipment cannot be segregated from the body or its main carrying capacity.

The cost of glass bottles is a factor which many investigators have held to be excessive, and we always grant their point that in some localities it is excessive. In other localities the bottle cost is reduced to a bare minimum, hardly to be improved upon, no matter how thorough the investigation or how thorough the installation of a new plan to save bottle costs. This is something on which we have worked very hard, and National Dairy alone stands to save many thousands of dollars if, on our average bottle breakage, we could get a bottle to serve one additional round trip. In some of the outlying territory a bottle makes but eight round trips and sometimes even less than that, depending on many varying factors, such as the type of market served, the extent of the distribution, or the percentage of business controlled in that locality. Many solutions to this problem have been offered us, such as the substitution of paper bottles for glass bottles, but so far the cost of paper has been, on the whole, more than glass. Of course, there is a certain place for paper bottles in distribution, such as to schools, delicatessen stores, and others, and at present we use not only glass bottles but paper containers in some cases in which it is possible to make only one delivery.

It will readily be seen that if we could lower our distribution cost we could save a great amount of money. The factors involved in securing economies on this distributing cost are many and varied, as I have tried to explain. The possibilities of securing a further reduction of these costs become fewer and fewer every day, since we are making constant strides toward the end of saving distributing costs, not for the benefit of our operating companies but for the benefit of the public which consumes the product. Our net profit from one quart of milk is very, very slight indeed in most instances, running less than one-third of a cent. If we could reduce the distributing costs by 1c., the saving resulting to the public would be enormous, and we are constantly working toward giving the public a quality product at the minimum of cost.

Redesigned Package Cuts Cake Baker's Losses

By EARL A. COX
President, Cox Baking Co.
Jamaica, N. Y.

STRANGE to say, the cake baker's strongest competitor is his potential customer. Fully 80 per cent of the cakes consumed in the American home are produced by the housewife, the individual whom the wholesale cake baker is endeavoring to serve. These competitors do not produce cakes because it is their personal wish to compete with the industrialist nor because their raw material and labor costs are enough lower to justify. Figured out in terms of dollars and cents, it is doubtful if these home-baking costs are as low for the same quality of cake as are the bakers' costs.

Unquestionably this housewife competition has persisted because the industrialist has one major problem in connection with his product that she does not have with hers. In her case the point of production is so nearly identical with the point of consumption that there is practically no opportunity for any deterioration between the time of production and the time of consumption.

In the case of the industrialist the opposite is true. To keep his manufacturing labor and overhead costs down to the minimum the industrialist must produce on a volume basis and extend his point of consumption to as much as several hundred miles from his point of production. Also his highly perishable product must pass through as many as four agents of distribution before it reaches the actual consumer. The period of elapsed time between production and consumption may be no greater but because this difference in the manner and method of getting the product from the producer to the consumer is so greatly in favor of the housewife, the industrialist is forced to seek ways and means of protecting his product to the greatest degree possible.

Achieving this protection involves food engineering in its several aspects owing to the fact that any deterioration of his cake from the time it leaves the doors of his bakeshop until it is served in the home the baker must regard as a distribution loss. Some of this deterioration is a matter of the physical structure of the cake itself, whereas the greater proportion of this waste is due to the manner in which the cake is packaged and to the construction of the container.

Even though the wholesale baker uses the same quantity and quality of ingredients as does the housewife he has to give these ingredients somewhat different mechanical treatment to build a physical structure that will suffer the least from the effects of handling and transportation. This treatment, in truth, is a production department operation; nevertheless its effect upon the consumer's attitude toward the wholesale cake baker's product makes it highly important from the distribution point of view. Because this more sturdy cell structure with a tender, velvety texture is so essential in the production of a high-quality cake the baker must avoid the compact and relatively thick-walled cell structure so characteristic of home-baked cakes. Otherwise he would have his product reaching the ultimate consumer in a soggy and unpalatable condition.

If this cell structure and intimately affiliated flavor problems were the only ones that the wholesale cake baker had to contend with in his competition with the housewife, his lot would not be such a difficult one. Under the conditions no appreciable headway can be gained by the baker unless he can so attract the attention of the prospective customer that the desire to buy is awakened. To this end years of effort and study have been spent in developing wrapping materials and packages to give the greatest amount of protection possible to the cake and at the same time permit the retailer to display the cakes in an attractive and sanitary manner.

With the development of relatively transparent wax papers, which permit wrapping of the cakes at a low cost and packaging in cardboard cartons or boxes, considerable progress was made in protecting the cake from dirt contamination, drying out or staling, crushing, and promiscuous handling by prospective customers. However, the cake when packaged in this manner is hidden from view and the housewife is in effect being asked to buy it on faith that it will be what she thinks she wants. This means that only an already existing demand is being satisfied. What the cake baker wants and needs for the success of his business is an increased demand for his products. This he can hope to get only by building up an "eye" and "appetite" appeal—by allowing the shopping housewife to see his products in an inviting manner.

In comparatively recent months this visibility has been made possible by improvements in water-clear transparent wrappings of the processed cellulose type. These wrapping materials also give cakes greater protection against drying out and staling, as well as protection against dirt contamination. Unfortunately, the use of these materials originally involved greater wrapping costs, because the cake cannot be wrapped directly on machines without damage to the cake itself. Also this direct wrapping of cakes, even by hand, does not give a sufficient increase in sales volume and reduction in damaged returns to justify the increased cost, as no protection is given the cakes against damage by crushing unless the cakes are also placed in a carton which again hides them from the prospective customer.

In our efforts to increase the demand for our products by strengthening their "eye appeal" and at the same time protecting them against contamination and damage during wrapping, handling, and display, we worked out the package, several styles of which are shown in the illustration.

This package is essentially a good grade manila cardboard carton which covers the cake sufficiently to give it container protection on bottom, two sides, and across a portion of the top. It has a wax-paper lining that prevents the cake and its decorative covering from coming in contact with the cardboard and also makes damage to the icing less likely.

In this manner the individual cake is given a definite and comparatively rigid package form that will permit it being machine-wrapped with a transparent wrapper. We have found that this cutaway-type of carton gives the cake all the container protection that the familiar type of cake carton gives and at the same time permits such visibility of product as we may desire for the purpose of familiarizing the prospective customer with the contents of the package.

Although this liner, carton, and wrapper combination has increased our package cost slightly, it has enabled us to cut down our stale and damaged cakes sufficiently to offset this added expense. It also helps by eliminating unsightly hand-wrapped packages, increasing the attractiveness of our packages, and, best of all, widening our markets.

Forward Planning Avoids Beverage Bottler's Distribution Leaks

SO NUMEROUS are the factors that enter into building up and maintaining a manufacturing business that too often one is confused in his mind when he speaks of his distribution problems.

If the product being manufactured has no market and all efforts to establish a market for it have been in vain, the fault lies not with distribution but with the management in its choice of product. If the product is being produced at a too high cost, or is reaching the consumer in an unsatisfactory condition or on a delayed delivery date, the problems to be solved are responsibilities of the production organization.

Distribution, in its broad sense, has to do with acquainting the prospective consumers with the product, seeing that the product comes onto the market in the form, quantity units, and style of package that will win consumer approval, and making the product available to the market that has been created for it. In some of its responsibilities the distribution organization comes so close to the field of management and of production that, unless careful consideration be given to the kind and quality of product to be marketed, and the manner, style, and quantity unit in which the product is to be packaged, profitable business will be lost and the distribution organization will be forced to take orders on an unprofitable basis.

On the other hand, by invading too far into this zone of common interest, the distribution organization can place such limitations and burdens on production that the business will be done on an unprofitable basis, even though the distribution organization is highly effective and the distribution costs are nominal. Such wastage of possible profits is a matter for the exercise of careful management to remove profit-losing handicaps. In the case of Canada Dry Ginger Ale, Inc. this has best been done by employing judicious economy in current expenditures and by economic planning during a period of good business conditions to meet the imposed circumstances incident to more competitive conditions. All department expansions and expenditures have been viewed from the angle of necessity and not on the basis of business at the particular moment. In other words, before any expansion or expenditure was made, assurance was sought that failure to incur the expenditure would be unprofitable economy.

In this way, the building up of an inflated distribution organization which might be tempted to justify its existence by making demands for a production volume that would be inconsistent with the possibilities of feasible production facilities was avoided. Anticipation of change in market conditions and consumer interest during the period in which production-capacity sales could be made at profitable prices and under low selling-cost conditions led to extensive changes in manufacturing operations and to the development of bottling machines that give very large production savings per year. These changes were completed at such a time during the present business cycle that it was possible to maintain the quality and the profitableness of the product and at the same time give customers the advantages of a 20 per cent reduction in price for the familiar 12-oz. bottle size, and subsequently the choice between a 12- and a 28-oz. bottle.

Ability to meet this shift in market conditions and to handle a higher production volume without disrupting the production organization permitted the meeting of price competition without impairing the quality of the product and with profit to the company. Furthermore, the results of this forward planning are shown in the ability to keep intact, on regular wage basis, the experienced and profitable production organization as well as to keep the distribution organization and equipment as effectively active as it was in years past.

Selection of markets and of the media to cover them has been found to be equally as essential as careful planning of the routing of salesmen for the markets thus selected. It has been possible to obtain data sufficiently indicative of the absorption possibilities of every major and secondary market by counties, and to tie that statistical material up with the local potential market for the product. With these statistically selected markets of greatest absorption capacity in mind, it is possible by the exercise of good practical judgment, to compare actual yields from a group of known high-return markets, in the experience of the individual company with a corresponding group of low-return markets and thus determine the actual volume of sales that can be expected from each market. With this information at hand salesmen can be routed to spend their time only in markets that are capable of yielding a volume sufficient to more than offset the cost of selling. Also by thorough observance of these principles, it is possible, in the progressive development of national distribution, to reach a point at which many salesmen traveling in less productive territory can be brought back into the major areas for more intensive development, as a secondary stage in perfecting national distribution and consolidating the ground already gained.

As an aid to this systematic selling, the alert advertising director buys advertising coverage with greater flexibility and with more regard to minute subdivisions of the national market than at any time in the past. He is learning to marshal his forces and to concentrate them where profitable results can be expected with a controlled expenditure of advertising media. He has found that the various kinds of media can be scheduled flexibly as to seasons, local conditions, and the local sales plan. He can even buy circulation with close approximation to freight rate zones, with very little surplus or excess coverage beyond the area of localized sales campaigns. In connection with an engineered distribution plan, the high development of post-office facilities for timing and controlling announcements is not being overlooked by him.

For a direct consumer market such as must be sought for a carbonated beverage product, advertising through the newspapers and popular magazines has been highly lucrative and the use of dealers' display cards and other forms of decorative advertising is effective. In the latter case a close check should be kept to prevent the purchase of more sets than can be put to profitable use, because by placing a restriction on the available number of these sets they are more likely to be placed in selected locations and requested instead of merely accepted.

Candy Institute Seeks Economic Distribution

By JOSEPH GOOCH, JR.
President, Candy Institute of America
New York, N. Y.

Organized in November, after more than six months' study of trade problems in the industry, the Candy Institute of America represents the first definite attempt of the confectionery industry to lift its products into a profitable high-quality food classification.

TO ME the difficulty of economic distribution lies not in the inability of the manufacturers to analyze and dissect intelligently the wastes of distribution. Rather it is first, that the individual manufacturer is not able to project intelligently the trends of future years and, second, that it is very difficult to make corrective moves without a group joining in such a program. For this reason over 65 manufacturers within the confectionery industry have created and financed the Candy Institute of America. Through its agency they hope that they may not only get a better understanding of economic practices, as a matter of bettering themselves, but that they may also better the industry as a whole.

There are certain things that this institute, which I have the privilege to represent, is not going to do. We are not asking anyone to surrender any legitimate competitive advantage that his ability gives him over anyone else. We are not asking anyone to do anything for the good of the industry; if they do it for their own good, that is sufficient. We are not asking anyone to hold an umbrella over anyone else. We are not going to try to run a Sunday school. The institute staff is human and the members are human.

The institute is peculiar in its organization. It has no committees, made up of members of the candy industry, assigned to do anything. The group recognizes the imperativeness of collective thinking and collective doing, and proposes to make a business of this by placing the collective function in the hands of the management, who in turn takes off its coat and goes to work for the group. We are making no predictions. We feel that the course is the right one. We feel that if we apply ourselves intelligently, maybe we will be able to answer some of the problems of distribution, and perhaps other problems of the manufacturer.

One manufacturer can do little alone. Obviously, he must manage his own business, and if he hasn't a sophisticated alertness and understanding of good business procedure, he is "out of luck." On the other hand, no matter how able that management is, it can go only so far in this cycle of desperate competition and fight to get the consumer's dollar—this fight, which because of the very severity of the competition, develops waste in distribution.

An industry, as an industry, can do little because there are too many manufacturers in it. In my opinion, the course of an industry over the next decade will be contingent on the degree to which leadership within that industry has come together to lead. I am satisfied that much can be done through a group who are leaders within an industry if that leadership can be intelligently brought together. It is through such leadership that we hope to work out means and methods of moving goods from the plant where they are manufactured to the consumer; through the jobber, retailer, the chain store, and any other machinery designed to get the goods to the consumer. The questions we are faced with may be expressed as follows:

What is to be the course of the chain store volume in the next five years? Will the volume increase materially, or has the chain store reached that point of invested capital and public service where its sales curve will not go materially higher? Or, is the chain store likely to double its business in the next cycle of industry? Where will the jobber stand? Where the independent retailer?

The independent retailer unquestionably is still in control of an impressive volume of retail dollars, no matter what industry one is talking about. I've heard about the jobber being due for a toboggan ride for the last twenty years, but he is still doing business; and, in the case of the candy industry, his volume of business increased 4 per cent in 1931 over 1929. I am not arguing for the chain, or for the jobber, or for the independent retailer. All I want, and what I believe most manufacturers want, is some dependable analysis and study through some disinterested outside agency that knows how to gage the trends; that hasn't the selfish interest of the manufacturer, but can project a course.

Ultimately the consumer buys the manufacturer's merchandise. That the manufacturer knows, but what he does not know is which factor in distribution is the right one for him to work with in his efforts to get his products into the hands of the consumer at a reasonable price to the consumer and with a justifiable profit to himself. In his individual efforts to determine the proper distribution channels for his products and to get dealer and consumer preference for his products he has fallen victim to practices that are becoming recognized as distribution wastes because they deprive him of the profits that rightfully belong to him. Some of these practices are recognized under the terms of "free deals," "prepaid freight," "special discounts," "shipments on consignment," and the like. Conceding that the manufacturer knows where the wastes of competition are, what can he do alone in this competitive fight to maintain the profit margin? This situation prompts me to ask, Who can intelligently chart the trends of distribution over the next five years? If certain trade papers could initiate this, in collaboration with the Department of Commerce, or certain other of the broad-gaged industrial agencies or organizations that would seem to be equipped to study the matter of trends, industry would have a starting point.

As for the confectionery industry, we hope, through the leadership represented by the Candy Institute of America, to set up a force that will help determine trends and that will lead to the production and merchandising of dependable products which the consumer will purchase on a basis that will be profitable to both the manufacturer and the distributor. As yet the institute is too young a child to speak of actual accomplishments; however, its backers are determined in their spirit and aims.

Delivery System Lowers Returned Bread Losses

FOR years the baking industry has recognized bread to be a perishable product; one that in less than 24 hours loses its flavor and becomes unacceptable to a high percentage of consumers. Also, it is well recognized that this loss in flavor occurs regardless of the quality of ingredients used or the perfection of the baking operations. Consequently, the concern of the baker is to close up the gap between the production base and the home plate with the Utopian hope of 100 per cent elimination of returns.

In its efforts to reduce the number of returned loaves, the General Baking Co. throughout its system of bakeries inaugurated a twice-a-day delivery system. This change from the traditional once-a-day delivery was made possible to some extent by improvements in baking equipment. Mixers, dividers, rounders, molders, proofers, coolers, and wrapping machines had all been rendered more efficient and more reliable by a series of inventions. The bakery building itself had evolved into a type that subserved dispatch in production along with betterment of the product. These improvements in and of themselves would not represent real progress, however, unless they contributed toward a more efficient distribution of the product.

A necessary factor in stepping up distribution is improved outdoor equipment. Wherever possible, motor vehicles have been placed in service, and the type of car has been selected according to the purpose it is to serve. In the main, delivery trucks of the 2- and 5-ton types are the ones most commonly used. The 2-ton type is used primarily by the route delivery salesman, whereas the 5-ton type is used, in certain cases where routes are distant from the bakery, to make deliveries from baking plant to distribution points from which the smaller route trucks operate.

In highly congested city districts, especially where the streets or alleys are narrow, crowded, or uneven, horse-drawn wagons are more economical and satisfactory to operate and can be seen regularly in the larger cities. Also the boxes in which the bread is carried from the bakery to the grocery stores have been built to hold a maximum number of loaves and at the same time to fit snugly into the vehicle. The old-fashioned system of cramming the bread in any way had to be abandoned. Crushed loaves meant returned loaves; overloaded boxes meant more handling of loaves. Even with the advent of dustproof, germproof wrappers, such handling is a possible reason for rejecting the bread when it is finally displayed in the grocery stores. A loaf of good bread demands careful handling. Cramming or squeezing is highly destructive to its texture and palatability.

In passing it may be remarked that the safety factor has always been a consideration in working out a better system of delivery. Today, salesmen of the General Baking Co., whether they drive automobiles or horse-drawn vehicles, are protected both in the construction of the vehicle and through the training each man receives in the technique of handling his car or his horse. An injury to a salesman not only delays delivery service; it may be the cause of the loss of a whole truckload of bread, which in days of bitter competition and narrow profits is no small item.

With the more efficient equipment followed a revision of the routine in the bakery shipping room. Here an organization was perfected that would help the salesman to drive up to the loading platform at a definite moment and get away in the shortest possible time with his truckful of bread. As soon as he leaves the platform the salesman becomes very much his own judge of how he will serve the grocers on his sales route, but regard for his own reputation for reliability and the competition of other bread salesmen naturally point the way to promptness and regularity as paying assets.

As might logically be expected, the development of a better delivery system has resulted in efforts to better coordinate supply with demand. Assuming that bread is delivered promptly and in good condition, returns will represent a failure to judge correctly the quantity of bread that a community or a district normally consumes. It was on this basis that the demand for bread was studied and bakery operations were regulated. Since the tendency of the times was toward the statistical record as a basis for judgment, a route book was devised for the use of General Baking Co. salesmen that would be of help. By keeping accurate count on both his morning and afternoon trips of the number of loaves remaining on the grocer's counter the salesman within a very short time was in a position to say with assurance just what the requirements of his route were. He noted seasonal trends in bread buying. He knew the effects of weather changes on buyers. He knew the days of the week when bread would be most in demand. In the case of some stores he could tell quite accurately the very hours of the day when the grocer's business would be running at the peak.

Also there came a change in the theory of bread selling. For years the idea of the bread salesman had been to load into the grocery store just as many loaves of bread as he could induce the grocer to take. And knowing that the refused loaves would be picked up, the grocer was not always averse to taking all he could find room for. Under the new régime, the idea of the salesman is to sell the grocer only as many loaves as can be disposed of within a definite period. Because the salesman is in a better position than himself to tell, the grocer frequently leaves it to the salesman to decide how many loaves should be put into the store. Not all grocers accept the plain advantages of this arrangement, but it gains in acceptance as the salesman establishes himself in the confidence of the grocer. This much is certain: it does cut down returns.

Mincemeat and Mayonnaise

A Contrast in Distribution Problems

By WILLIAM R. McKELDIN

Secretary, Atmore & Son
Philadelphia, Pa.
President, Mayonnaise Manufacturers' Association

AT A recent food show a housewife passing our booth remarked, "Oh, Atmore mincemeat! I always buy it *at Christmas.*" Although there are no figures to substantiate it, I believe that about 75 per cent of the mincemeat purchased for home baking is bought for Thanksgiving and Christmas.

Added to this problem of distribution is the fact that the best mincemeat is a semi-perishable food product which improves with age during cold weather but starts spoiling with the advent of hot weather. This means that we must obtain maximum distribution by Nov. 15, at the latest, and take every possible step to assure complete stocks in every grocery store for Christmas and New Year's Day. And yet we must always keep clearly before us the fact that the mincemeat which is not sold for the holidays will probably not be sold that winter. Such surplus stock must be returned to the factory to be salvaged in the best possible manner.

So we have a seasonal—and a short season at that—and semi-perishable product to distribute, added to which we have had for the last few years a noticeable diminution of home baking of pies.

In avoiding waste in the distribution of mincemeat we must first bear in mind that pies are eaten only by English- and German-speaking people; and mince pie, which is of English origin, is popular only with the English and Americans. From that fact we know that it will probably prove futile to attempt to distribute mincemeat to cities or to neighborhoods that are predominantly Italian, Jewish or French.

When possible to have our salesmen do so, they check the stocks in retail stores a week before Thanksgiving and again a week before Christmas. We have found that if this checking is not done by our men, the grocer will overlook his stock of mincemeat until it is all gone. If we wait for this to happen before he re-orders, we not only lose sales but the cost of making delivery on the short notice usually given to widely separated stores, adds to the cost of distribution to such an extent as to make such delivery impracticable.

In the spring it is necessary to permit return of surplus stocks held by grocers, because they do not know how to handle their stocks of mincemeat when the weather turns hot. To say that this adds to the cost of distribution is absolutely right, but, if we do not help the grocer in the spring he will sell the mincemeat the next fall to a purchaser who will do one of two things: return the mincemeat and get her money back and refuse to buy any more of that brand of mincemeat, or become permanently disgusted with all manufactured mincemeat. In either event, a customer has been lost and the grocer probably will make a claim for the spoiled mincemeat. Therefore, in the end one would lose more than he would have, had the return of the mincemeat been permitted in the spring. The latter is the lesser evil.

Mayonnaise, on the other hand, although classed as a semi-perishable, presents an entirely different distribution problem, and the methods for proper and economic distribution of this very popular item of the food budget are now being given much thought.

Photograph by Bachrach

William R. McKeldin

Mayonnaise, as it is generally sold on the grocery markets, is made of fresh egg yolks and fresh vegetable oil, corn oil or cottonseed oil, vinegar and spices. As neither the material nor the finished product is pasteurized or sterilized, it is necessary that mayonnaise be placed in the consumer's home as soon as possible after being made. Here is a problem in distribution and one which invites careful study to eliminate waste. Stores should be serviced at least once a week, fresh mayonnaise sold to the grocer, and mayonnaise which is three months old should be picked up.

To give the storekeeper the proper service and to keep the cost of distribution within a reasonable limit requires forethought and careful planning, unless, of course, the manufacturer belongs to that fast diminishing class that requires "volume at any cost."

In making a distribution study of mayonnaise we should first divide our prospects into two classes:

1. The bulk buyer — restaurants, hotels, lunch rooms, sandwich shops, soda fountains, lunch bars, boarding houses, fraternity houses, and the not-to-be-overlooked "hot-dog" stands.

2. The small package buyer—retail grocery stores, chain stores, meat markets, vegetable stores, bakery shops, and even soda fountains.

Unfortunately, in the former class too many buyers consider only the first price of the mayonnaise without regard to cost per serving or quality of product. Therefore, if the mayonnaise is a quality product and the manufacturer wants some profit, it will be difficult to keep the cost of distribution to this class of trade within a safe margin. If, on the other hand, it is a low-priced product on which one can afford to sell close, the only distribution worry is service—early and frequent—because here it is a case of "the early bird catches the worm."

In the second class of dealers the distribution problem is more complex, because the dealer is merely an intermediary between the manufacturer and the ultimate consumer; and not infrequently the intermediary is doubled, due to the necessity of dealing with grocery jobbers and retail grocers. This, however, is not quite as desirable as the method most used: that of wagon distribution to the retailer.

Here again, prospect lists should be scanned carefully for type of store, neighborhood, financial standing, general standing, number of brands being handled, method of displaying, and store arrangement. In the first analysis of routes, one should consider carefully the frequency of service that is going to be desirable and necessary, as that is the best way to avoid waste in distribution. Very frequent service may not be necessary and too few calls may result in loss of business, due to grocers not having stocks on hand.

If it costs an average of 50c. to make a delivery, with its necessary office bookkeeping and record making, then obviously it is necessary to make each sale average at least $3 or more, or otherwise distribution costs are going to be excessive. Of course when opening up new territory this condition is excluded for a reasonable time. Constant careful analysis of prospects and markets, coupled with judicious pruning is the sure way to eliminate waste in the distribution of these semi-perishable products.

Canned Foods

One of the Sorest Spots In the Distribution Field

By V. H. PELZ
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DISTRIBUTION of canned foods is being reshaped under the impact of the same forces that are now causing fundamental alterations in the distribution structure for all food products. These underlying developments have brought about certain changes in the marketing of canned foods which have in turn presented to the canning industry certain critical problems, emphasizing the need for the industry to exercise an increasing degree of control of the marketing of its products.

First, there has been the steady increase in volume of fresh fruits, and particularly fresh vegetables, brought about: (a) by the shift of fruit and vegetable production from a home to a commercial basis; (b) by the expansion of commercial growing areas; and (c) by improvements in transportation and refrigeration. In virtually all urban markets today, most fresh fruits and vegetables are available nearly the year round. Since 1921, every year without exception has seen an increase in the total car-lot movement of ten items: asparagus, string beans, cauliflower, celery, cucumbers, lettuce, peas, spinach, carrots, and tomatoes. The total of these in 1921 was 65,551 cars; in 1930, 171,673 cars, an increase of 161.9 per cent.

In the competition between fresh and canned items a collateral factor undoubtedly has been the steady emphasis on the importance of fresh vegetables in the diet and the fact that the canning industry for many years has allowed to go unchallenged the general belief that canned vegetables were inferior to fresh from a nutrition standpoint.

The second fundamental change in food distribution which affects canned goods has been the recent development of the all-round-food or combination store as the dominant type of food outlet. As production of perishables has shifted to a commercial basis, retail outlets have been forced to carry an ever increasing volume, which reaches consumers largely through these combination stores.

The third major change has been the chainizing of retail outlets. The regular chains now control about 35 per cent of all grocery, meat, and produce business. The voluntary chains, which now outnumber the centrally owned, account for another 25 per cent. Hence 60 per cent of the grocery, meat, and produce business is now being done through chainized retail distributors.

The canning industry is not alone in having been vitally influenced by these basic changes in food distribution; meat packers, bakers, butter makers, and milk producers likewise have been affected.

The most obvious consequence has been the decline—almost the abolition—of future buying by distributors and the substitute general policy of purchasing for replacement or current needs only. This tendency has been strengthened by the heavy production of canned foods during the past few years. Excess packs have in part been caused by failure of canners to realize that decline of future buying is a permanent, not temporary change, and hence they have tended to mistake increased spot purchases by distributors for outright increase in consumptive demand.

Wholesale grocers have been forced to follow the lead of the chains in decreasing their future purchases. Retailers likewise have practically abandoned future buying. All food distributors, under pressure of chain competition, have come quite generally to accept replacement buying as part of a basic theory of merchandising which rests upon quick turnover, volume purchasing, and price-appeal selling.

Closely connected with hand-to-mouth buying as a major change is the fact that canned foods no longer are the items of primary importance to distributors, either wholesale or retail, that they once were.

The increase in volume and the growing attractiveness of display of perishables—which in the typical combination store make up between 50 and 75 per cent of total sales—have served to build up in the retailer's mind the importance of rapid turnover and sound merchandising, rather than speculation, as sources of profit. Because canned goods turnover is slow, this has in itself diverted attention from them.

These causes and their results have brought the canning industry face to face with certain major distribution problems. No longer is it the isolated industry, which it was before the war, able to go its own way with only slight regard to developments in other fields of food production and distribution. Today the canning industry is as intimately tied up to the rest of the food industry as the United States is to Europe by its common interest in world trade and world debts. This means that the industry should take steps to get and keep control of the marketing of its pack on a 12-months replacement basis instead of on the basis of selling futures.

More specifically, this problem of controlling its own distribution requires first of all the strengthening of canners' financial position so that they, instead of distributors, can carry the pack from one season to another.

Second, to control distribution, the canning industry as such should organize to meet the competition of fresh, possibly also that of quick-frozen, fruits and vegetables on a basis of the actual relative advantages of each to consumers.

Third, getting control of production means that canners should take steps to eliminate the widespread demoralization of markets which has resulted from a combination of overproduction, financially weak sellers, chainized buying, and inter-market competition.

What steps it will be necessary for canners to take in order to secure adequate control of their own distribution is a problem for the future, but it is certain that the problem cannot be solved until there is developed within the industry itself the leadership needed to formulate and execute a fundamentally sound program for adjusting the production of canned goods to potential consumption. Canners must become merchandising-minded. It is to be hoped that numerous efforts which have been made in the last two years in local areas looking toward better adjustment of production to consumption can be coordinated and strengthened. The National Canners' Association could do no more constructive job at this time than to take the leadership in such a movement.

Step-by-step evolution is culminated by

Nation-wide Distribution Of Ready-to-Cook Biscuits

By T. B. MORTON
Manager, OwenReady Division
Ballard & Ballard
Louisville, Ky.

THE production of 100,000 packages of Ballard & Ballard's "Oven-Ready" biscuits daily may justifiably be said to be causing a revolution in biscuit making. Yet the steps in the distribution of this product that have taken place in the last two years represent evolution, rather than revolution. As a matter of fact, the latest step in this evolutionary process took place less than a month ago, when distribution of the ready-to-cook biscuit dough was transferred to the Kraft-Phenix Cheese Corp. Taken as a whole, the history of the distribution of the product is as clear-cut an example as could be found for logical, step-by-step progress of a perishable product from a single neighborhood market to one that will be nation-wide.

It all began back in Bowling Green, Ky., when L. B. Willoughby, master baker, conceived the idea of selling uncooked biscuits direct to housewives, delivering them each morning in the familiar "milk-route" manner. The idea met with approval, and he gradually worked out a recipe for a Southern style buttermilk biscuit that would keep, under refrigeration, for about two weeks.

Then the first step in the evolution took place. Mr. Willoughby moved to Louisville, set up a small shop in a reconstructed garage, and supplied housewives in the vicinity with "Olde Kentuckie Buttermilk Biscuits." With the help of a boy with a bicycle and a single light truck, he was able to mix and deliver about 6,000 biscuits a day. Word-of-mouth publicity, along with some judicious free sampling, was sufficient sales promotion soon to overtax the capacity of his plant.

In January, 1930, Ballard & Ballard made arrangements with Mr. Willoughby to take over the business and promote it on a larger scale. Further evolution was necessary, however, before its nation-wide possibilities could be considered. Development of production and distribution methods had to go hand in hand.

First of all, it was realized that widening of markets for such a specialty necessitated the use of established retail outlets. The product required refrigeration, but the usual store refrigerator for butter, cheese and similar items was perfectly satisfactory provided the product was delivered to these outlets under refrigeration at frequent intervals. Obviously, a fleet of refrigerated trucks was the answer. Thus, in this distributional "survival of the fittest," the bicycle became extinct. Competent trucking engineers developed specially insulated truck bodies for the work.

But evolution along other lines was required as well. The word-of-mouth advertising of Mr. Willoughby's local venture had made the trade name of the product relatively unimportant. In planning wider marketing, it was necessary to indicate clearly that the product was already fully prepared, but not yet baked. Hence the name "OvenReady" was given to the product.

The package, too, required improvement when delivery was to be extended beyond the strictly local area. The package then in use was a cylindrical fiber carton with fiber caps on top and bottom. If kept more than a few days, gaseous expansion was likely to produce a package that was bulging and unattractive.

The container required to meet the new conditions had to protect the dough against moisture, extreme dryness, heat, and gaseous expansion. As finally developed, it consists of a durable spiral-wound fiber tube both sides of which are smooth, with metal ends. The disks of compressed dough within are wrapped in foil and oil paper so that the foil on the top is free to adhere to the metal cap. The label has been varnished for added protection against moisture.

Naturally, plant expansion accompanied the widening of distribution range made possible by this progress. In six weeks' time, 3,000 packages (ten biscuits to a package) were being produced daily.

Ballard & Ballard soon saw the need of divorcing itself as a company from the turbulent biscuit enterprise in all except the support of established prestige. The next step in the evolution, therefore, was the organization of the OvenReady biscuit division, to act "on its own."

The real national possibilities of the product had to be known as the next step in the evolution. Atlanta, Ga., was chosen, and in six weeks sales rose from 600 to 6,000 packages a day. Again plant expansion had to keep in step, and capacity at Louisville was raised to 15,000 packages a day.

But the question then arose, "Will Northerners take to Southern style biscuits? Have we a national product, or just a Southern product?" Again a sales test gave the answer. The product was shipped to Indianapolis under refrigeration, and a daily sale of 5,000 packages followed a 30-day campaign. Now the plant capacity had been boosted to 100,000 a day!

The latest step in the evolutionary process then appeared on the horizon. Here was a product with nation-wide sales possibilities, but a product that required refrigerated transportation, and rapid—preferably overnight—distribution from centrally located production centers to competent retail dealers. Such a system could not be created overnight. To determine suitable division centers for plant location was in itself a problem. To underwrite the necessary investment in refrigerated trucks and build up routes, all for a single product, was certainly of doubtful economic justification. Particularly was this so when, for products requiring a similar type of handling, yet entirely non-competitive, they were already in existence. Thus the transfer of the distribution function to Kraft-Phenix Cheese Corp. is the culmination of the evolutionary process. Five Kraft division centers, which will eventually be established by Ballard & Ballard as production units as well, will place every point in the United States within overnight range of the fleet of more than 3,200 refrigerated trucks operated in this service.

Price Competition Harasses Ice Cream Marketing

FROM a mechanical standpoint, ice cream distribution has continued its progress in the elimination of waste. Application of refrigeration engineering to insulated truck bodies, improvements in methods of using solid CO_2 and cartridge refrigeration, and developments in the retail cabinet field have all helped to minimize physical deterioration of ice cream. The trend to ice cream packaged at the plant has helped to cut dispensing wastes as well.

Commercially, however, ice cream distribution is still a victim of a number of ills. Fluctuations in the cost of dairy products used as raw materials has complicated the price situation, making it difficult to determine where legitimate price reductions have left off and competitive price slashing has begun.

A 14 per cent loss in sales volume, although not unfavorably disproportionate to general business conditions, has intensified competitive conditions, particularly as a result of increasing overcapacity in the industry. At the recent convention of the International Association of Ice Cream Manufacturers, for example, Secretary Fred Rasmussen reported that 328 new plants had been opened in eight months of the 1930-1931 period, as compared to 107 in eight months of the 1928-29 fiscal year.

Uneconomic practices in ice cream distribution could be alleviated to a great extent by ethical cooperation between competing manufacturers, particularly in respect to retail dealers. This point was stressed by C. R. Lindback, president of the association, who has been urging ice cream makers to adopt the ethics of the milk industry in this respect. Efforts on the part of manufacturers to hire dealers away from competitors have been particularly damaging to orderly merchandising of ice cream, he maintained.

The dealer situation has been further complicated during the past year or so by the growth of the peddler system. "Unemployed" salesmen equipped with insulated boxes, refrigerated by solid CO_2, have obtained sufficient volume in the sale of ice cream confections and sandwiches in some localities to affect dealer trade seriously. Distribution through wholesalers and direct from the plant platform have both been used. Divided feeling exists as to the advantages of using this outlet. In some cities it is forbidden by law; in others it has been held accountable for sales that would not otherwise have been made. In its most highly developed form, sales are made by uniformed attendants from attractive refrigerated trucks on city streets and at vantage points along the highway.

Concerted action on the part of wholesale ice cream manufacturers has recently been directed at the counter-freezer and frozen-custard trade. Because such units in many localities are not subject to the sanitary supervision which wholesale plants receive, they have been able to trim costs to a point that, ruinous as it may be to quality, permitted price cutting. Once begun, the price competition has often spread upward to larger manufacturers.

Although the financial realignments that brought ice cream plants definitely into the class of big business have ceased to go forward as they did in the "merger" period, internal readjustments to gain benefits of combinations that previously existed only on paper are helping to cut distribution losses. Experience is indicating the exact balance between centralized and decentralized control that is most efficient. One large organization that operated a number of subsidiaries in the same market as separate entities, for instance, is now centralizing sales under a single head. In other localities and under other conditions, the trend has been toward decentralization.

Some of the most promising efforts in promoting better distribution practices in the ice cream industry have resulted from the work of the accounting bureau of the international association. Standardized accounting methods have been set up, and statistics secured from 88 organizations with an annual production of almost 40,000,000 gal. show healthy averages for costs in plants of various capacities in eight geographical districts.

Figures for 1930, for instance, show an increasing proportion of the total cost charged to distribution, the national average being 35.70 per cent in 1930. Average distribution costs in the North Atlantic district are more than 15 per cent higher than in the Middle West, a significant point as to competitive conditions.

Naturally, statistics such as these are not in themselves the solution for many of the ills of distribution. They offer a means of comparison, however, that can alleviate price cutting born of ignorance of legitimate costs.

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How National Biscuit Controls Its Distribution

AS biscuits and crackers are semi-perishable, the aim of the manufacturer in this field is to distribute his products to the retailer in the shortest possible time, and in this manner preserve the flavor and crispness of goods which are just out of the oven. The distribution of semi-perishables, as well as of perishables, is most often carried out by the manufacturer himself in order to avoid any possible delays between producer and consumer that would be disastrous to quality. This brings the whole distribution function under a single controlling agency, a plan which is followed by National Biscuit Co. And this, of course, has the advantage of bringing other factors, particularly the cost of distribution, under the same centralized control.

The physical equipment needed for performance of its own distribution from 57 cracker plants and 18 bread bakeries, strategically located in various parts of the country, includes 255 sales agencies and warehouses as distributing points, together with the regional and district sales headquarters. From the warehouses National Biscuit distributes 95 per cent of its sales by its fleet of 2,543 motor trucks. Time in transit being a factor to be reckoned with, has been brought down to a matter of minutes from oven to retailer in some populous cities, and the average time required to transport goods from the oven to the retailer throughout the country is not more than 48 hours.

On the retailer's shelves, biscuits and crackers which are properly made and properly packaged have a so-called shelf-life of from 30 to 60 days, during which they are in perfect condition. National Biscuit's sales plan, however, is so organized that goods on retail shelves move into consumption as rapidly as possible. Every retail distributor is visited by a salesman every week. Thus control of volume of production arises very properly from the consumer end of the distribution function, and no goods are produced except those for which there are actual orders.

Price discounts for quantity are identical to all classes of buyers. Any purchaser can buy identical quantities at the same price at any place in the country. The price is quoted on a delivered basis, irrespective of locality. Furthermore, the sales plan involves payment for goods on delivery, which eliminates nearly all credit problems.

It is true that, like many other industries, the biscuit and cracker industry has considerable overcapacity, but this is no reason for forcing prices down to profitless levels. By playing fair to themselves as well as to the trade, National Biscuit Co. is able to earn a reasonable profit.

How A. & P. has achieved

A Shorter Commercial Path For Fresh Fruits and Vegetables*

By HARVEY A. BAUM
Vice-President, Atlantic Commission Co., New York, N. Y.

DURING the past ten to fifteen years there has been considerable improvement made in the distribution of fresh fruits and vegetables. The progress has largely come from three sources:

1. Education of the producer to grow, grade, and pack merchandise more in conformity to consumer demand.

2. A vast improvement by transportation lines in refrigeration and delivery time from distant areas to consuming centers.

3. The advent of the chain store into distribution and retailing of the more perishable lines of these commodities.

The last I consider most important. Not only has larger consumer demand been created by the several thousand additional outlets but the coordination of marketing practices has narrowed distribution cost. It was only a few years back that there was a spread of 40 to 50 per cent between wholesale market value and retail price. Since the chain stores entered the field this spread has been reduced to 20 or 25 per cent.

It must be borne in mind at all times that the consumer is the deciding factor in the economics of food distribution. There is no more obvious waste than to produce, transport, and distribute merchandise that does not meet the requirements of the consumer. Especially in respect to varieties, grades, pack, and condition, the entire operation must be coordinated to the consumer's wishes. There is still considerable room for improvement in higher standardization of grades, condition, and pack to eliminate a greater percentage of waste due to now allowable grade tolerances. The standards could be raised and furthered by the U. S. Department of Agriculture classification of U. S. No. 1 merchandise.†

Decentralization of distributing points in large consumer markets also would eliminate much needless expense and deterioration. We have a noticeable example of uneconomical procedure in New York City. In fact, the distribution of fresh fruits and vegetables in this great city is operated on the same basis as in many cities of 100,000 to 150,000 population, and the same condition has existed for the past 50 years or so.

One centralized market exists at the lower end of Manhattan Island where thousands of cars of fresh fruits and vegetables are discharged on the piers. Sold to jobbers by commission houses and wholesalers, the produce is loaded on trucks and delivered to such jobbers at the outlet of the pier. The jobbers must then cart it to Wallabout, Harlem, Gansevoort, or other markets. Here it is unloaded at jobbers' establishments and resold to retailers. Finally, it must be loaded and trucked once more to the retail outlets. All of these cartages, loadings, unloadings, and delay result in rehandling and lack of refrigeration, raising distribution costs and lowering quality.

This procedure should be eliminated by decentralized markets operating somewhat in the same basis as the dairy and meat packing industries, thereby delivering this merchandise in carloads to various decentralized distributing centers with but one physical transition to the retail outlets.

Delay on street and truck affects the quality of much of New York's produce

To minimize wastes of this kind, the Great Atlantic & Pacific Tea Co. has installed modern produce houses at several distributing points and the larger part of its merchandise is transported direct from producing areas throughout the country to these points, and then trucked directly to retail outlets. The merchandise remains under refrigeration in carloads, and is not exposed to change of temperatures for a period of hours, as is the case when transporting merchandise from a centralized market. Moreover, expenses in handling are minimized.

Shortly after we entered the retailing field in the more highly perishables, seven or eight years ago, owing to our large volume, we experienced considerable difficulty in obtaining high standard uniformity of packs for these requirements in sufficient quantities through commission houses and wholesalers.

It necessitated, therefore, our setting up an intermediate organization, the Atlantic Commission Co., to contact directly with large growers, cooperative organizations, and the like, throughout the United States, Canada, Mexico, and Cuba to work out mutual arrangements for coordination in distribution. Moreover, it permitted us to carry on certain educational work among growers to produce varieties, grades, and packs according to consumer demand in our retail outlets.

We also cooperate with producing organizations to the extent of finding an outlet for surplus merchandise above our requirements. National sales during the peak movement of seasonal commodities, for instance, have helped to eliminate glutted and demoralized markets and the wastes that result. Some of these sales have been astounding in volume; for instance, at the height of the peach movement during the past season we sold over 1,000 carloads through our stores in one week. Equivalent results for various cooperative growers covering many other commodities have been achieved, and our customers naturally received the merchandise at exceptionally attractive values.

Elimination of demoralized conditions in some markets while scarcity exists in others has been made possible by systematic routing to about 600 carload markets. A private wire system nation-wide in extent which enables us to keep in touch with producing areas at all times makes this possible.

As for the results achieved, they can be judged from the fact that during the past year total sales by A. & P. outlets covering fresh fruits and produce exceeded $142,000,000 and a tonnage in excess of 100,000 carloads, or equivalent to about 10 per cent of the total movement for the entire country.

*Summarized from a paper presented at the Food Wastage Conference of the New York Food Marketing Research Council, Dec. 15, 1931.

†Note (Discussion comments by Mr. Baum)—A large waste, for instance, has resulted from shipments of U. S. No. 1 potatoes, which, although falling within allowable tolerances, contain a considerable proportion unsalable from the consumer's standpoint.

THE BUSINESS PAGE

Distribution of Sales, 1929, in the Confectionery Industry

(Released by U. S. Bureau of the Census)

	Selling Value (F.o.b. Factory)	Per Cent of Sales	Number of Plants — Total	Number of Plants — Selling Exclusively as Indicated
Total	$399,532,000	100.0	2,021*	...
Sales to manufacturers' own wholesale branches†	19,024,000	4.8	132	30
Sales to manufacturers' own retail branches	36,860,000	9.2	417	184
Sales to dealers:				
Wholesalers	217,280,000	54.4	922	281
Retailers	107,161,000	26.8	961	289
Sales to consumers:				
Large (schools, institutions, churches, etc.)	5,174,000	1.3	151	...
Household	14,033,000	3.5	405	182

Of the above sales, except those to manufacturers' own sales branches or to household consumers, $51,111,000 was made through manufacturers' agents, selling agents, brokers, or commission houses by 281 manufacturing plants, 93 of which sold their entire output in this way.

*The total number of manufacturing plants engaged primarily in the manufacture of confectionery is 2,021. Inasmuch as some plants sell to more than one type of customer, this figure is less than the total of the figures shown below it.

†This report does not show the distribution of sales of manufacturers' own sales branches.

Distribution of Sales, 1929, Canning and Preserving Industry

	Selling Value (F.o.b. Factory)	Per Cent of Sales	Number of Plants — Total	Number of Plants — Selling Exclusively as Indicated
Total	$744,610,000	100.0	2,997*	...
Sales to manufacturers' own wholesale branches†	121,053,000	16.3	305	115
Sales to manufacturers' own retail branches	17,409,000	2.3	39	22
Sales to dealers:				
Wholesalers	503,528,000	67.6	2,445	1,405
Retailers, including chain stores	70,335,000	9.5	595	121
Sales to consumers:				
Industrial, and interplant transfers (other manufacturers, hotels, restaurants, etc.)	29,985,000	4.0	334	109
Household	2,300,000	0.3	190	15

Of the above sales to dealers and industrial consumers, $260,440,000 was made through manufacturers' agents, selling agents, brokers, or commission houses by 1,441 manufacturing plants, 740 of which sold their entire output in this way.

* The total number of manufacturing plants engaged primarily in canning and preserving fruits and vegetables is 2,997. Inasmuch as some plants sell to more than one type of customer, this figure is less than the total of the figures shown below it.

† This report does not show the sales by manufacturers' own wholesale branches to dealers or industrial consumers.

Distribution of Sales, 1929, in the Ice Cream Industry

	Selling Value (F.o.b. Factory)	Per Cent of Sales	Number of Plants — Total	Number of Plants — Selling Exclusively as Indicated
Total	$373,027,000	100.0	3,150*	...
Sales to manufacturers' own wholesale branches†	38,774,000	10.4	238	38
Sales to manufacturers' own retail branches	17,536,000	4.7	379	148
Sales to dealers:				
Wholesalers	39,552,000	10.6	289	69
Retailers	225,274,000	60.4	1,775	721
Sales to consumers:				
Large consumers (restaurants, hotels, picnic committees, steamship and railroad companies, etc.)	10,909,000	2.9	216	24
Household	40,982,000	11.0	1,791	904

Of the above sales, except sales to manufacturers' own sales branches and to household consumers, $6,708,000 was made through manufacturers' agents, selling agents, brokers, or commission houses by 57 manufacturing plants, 29 of which sold their entire output in this way.

* The total number of manufacturing plants engaged primarily in the manufacture of ice cream is 3,150. Inasmuch as some plants sell to more than one type of customer, this figure is less than the total of the figures shown below it.

† This report does not show the distribution of sales of manufacturers' own wholesale branches.

Business Decline Slower

The decline in general business conditions during the past month is only 45.0 per cent of the decline for the previous month. The *Business Week* index stood at 64.4 per cent of normal for the week ended Dec. 23, in comparison with 66.2 per cent for the middle of November and 70.2 per cent for the middle of October.

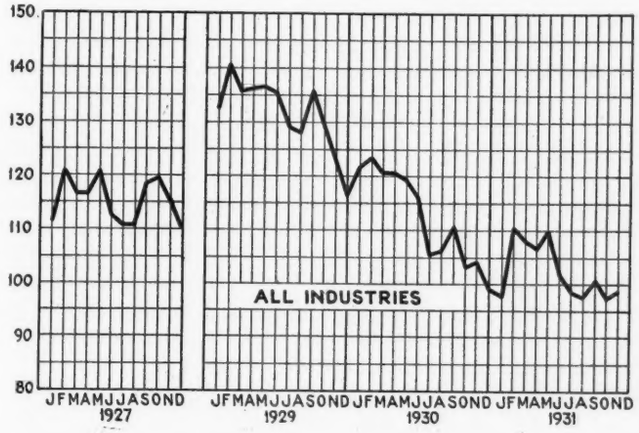
Wholesale prices of all commodities declined only 0.15 per cent for the month ending Nov. 15, in contrast with a decline of 1.01 per cent for the month ending Oct. 15 and 1.56 per cent for Sept. 15. Wholesale food prices showed a decrease of 2.34 per cent, 0.41 per cent, and 1.09 per cent, respectively, for the same periods. Wholesale prices on foods other than meats and dairy products increased 1.18 per cent during the month Oct. 15 to Nov. 15.

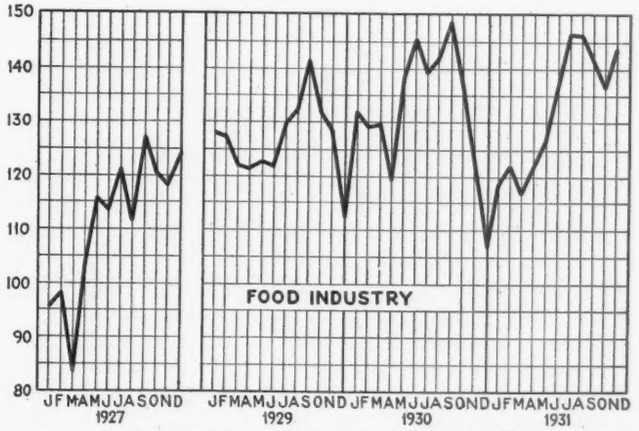
A weighted price index gives a decline of 2.83 per cent in general commodity and 6.85 per cent in food prices for the week ended Dec. 26, as compared with those of the week ending Nov. 28. This index, reported in the December issue of FOOD INDUSTRIES, gave declines of 9.3 and 3.11 per cent respectively for the preceding monthly period.

Retail food prices in 51 cities during the month ended Nov. 15 fell off 2 per cent, as contrasted with 0.33 per cent decline in each of the two preceding months. An increase of 4.64 per cent in tonnage and a decrease of 6.42 per cent in dollar sales are reported by a national food retail organization for the month of November, in comparison with the same month in 1930.

Production in Food Industries Compared to All Industries

The index figures upon which these two curves are based are made up from reports from public utility companies and from manufacturers who generate their own power. Utility reports are practically complete for the whole country and the reports for self-generated power include large and small concerns in all parts of the country, engaged in a broad group of manufacturing activities. Electrification of industry is so nearly universal that the editors of FOOD INDUSTRIES consider an index of electrical power consumption to be the best indication of the level of industrial activity.





Curves are based on electrical power consumption, data supplied by "Electrical World"

THIS MONTH—

JANUARY

4-6—Northwest Canners' Association, New Washington Hotel, Seattle, Wash.
4—Northwest Fruit Barrelers' Association, New Washington Hotel, Seattle, Wash.
19-22—Western Fruit Jobbers' Association of America, Roosevelt Hotel, New Orleans, La.
24—Western Confectioners' Association, Coronado, Calif.
25-28—National Canners' Association and related groups (see story on following page). Canning Equipment and Supplies Exhibit, Hotel Stevens, Chicago, Ill.
26-30—American Society of Refrigerating Engineering, Hotel Cleveland, Cleveland, Ohio.
30—American Cranberry Growers' Association, Walt Whitman Hotel, Camden, N. J.

Hors d'Oeuvres

RUSSIANS will have more to eat, if Soviet plans for next year are fulfilled. The capital investment of the supply commissariat will be increased 187.2 per cent; the funds for public feeding, 36 per cent; and for manufactured goods, 14 per cent. Improvement in living standards is the focal point of the new plans.

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THE LARGEST single order for dairy equipment ever made, including thirty-three 4,000-gal. and twelve 3,000-gal. glass-lined steel milk storage tanks, has been placed by the Dairymen's League Cooperative Association, New York, N. Y. The Pfaudler Co., Rochester, N. Y., will build the equipment.

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PRESIDENT HOOVER has sent a check for $5,000 to the Professional Engineers' Committee on Unemployment, according to a report of the chairman, H. deB. Parsons. Mr. Hoover commended the work of the committee in aiding engineers in difficulties as a result of the unemployment situation.

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VITAMIN D has been made synthetically without the use of irradiation at the research laboratories of Mead, Johnson & Co., Evansville, Ind., it was reported to the American Association for the Advancement of Science on Dec. 29. This follows reports from Stockholm, Sweden, that Dr. Ottar Rugh has isolated vitamin C in pure crystalline form.

FOOD INDUSTRIES was founded in October, 1928, by the McGraw-Hill Publishing Co., with Dr. H. C. Parmelee as editor. The present editorial staff is Dr. Laurence V. Burton, editor; Graham L. Montgomery, managing editor; R. S. McBride (Washington, D. C.), Earl D. Stewart (San Francisco, Calif.), E. S. Stateler, E. Scott Pattison, and Louis C. McCarthy, assistant editors.

What Food Men Are D

Freight Rate Rise Goes Through—Big Food Law?—Packers' Decree Again—Stru Graft"—Chicago Call

FREIGHT RATE SURCHARGES will become effective Jan. 4 with the filing by the railroads of a master tariff carrying the increases authorized in the Interstate Commerce Commission's revised schedule of Dec. 5. Under this schedule, corn-cob meal, cobs, husks, and stalks, and flaxseed hulls, previously listed for an increase of 1c. per 100 lb., were transferred to the list of farm products exempt from any increase in rates. The surcharge on raw peanuts remains 1c. per 100 lb., as originally announced (FOOD INDUSTRIES, December, 1931, p. 542), but roasted, shelled, or otherwise processed peanuts must pay an increase of 2c. All less-than-carload freight will also pay the 2c. surcharge. The attempt to exempt short-haul l.c.l. traffic was abandoned because of difficulty in determining the length of haul at a given rate.

INCREASED PENALTIES for food law violators are asked in the annual report of the Food and Drug Administration. At present, jail sentences for violations are practically impossible when the shipper is a corporation, it points out, and fines are paid as if license fees for the illegitimate business. "More severe financial penalties" are needed.

More general authority to establish definitions and enforce tolerances is also urged. These tolerances would then definitely establish a basis for violations. Now the standards for most products are merely administrative; expert testimony must be employed in each case to show their validity.

The "Bred Spred" case, lost by the Administration before the Circuit Court of Appeals, has led to another recommendation—that the paragraph permitting sale of mixtures or compounds "under their own distinctive names" be repealed. The Administration considered "Bred Spred" an imitation fruit preserve, but the courts rule it was just plain "Bred Spred," and not an imitation of anything. The Administration has also asked that the "slack-fill" bill, now in Congress, be approved.

UNEMPLOYMENT AMONG LAWYERS ought to be considerably lowered within the next few months, as the Packers' Decree appears once more on the legal horizon. Appeals to the U. S. Supreme Court were filed on Dec. 10 by the Department of Justice, the National Wholesale Grocers' Association, the American Wholesale Grocers' Association. A legalistic football for over ten years, the decree was partially modified by the District of Columbia Supreme Court early last year, which removed the restriction prohibiting the packers from dealing in lines unrelated to meat. The provision forbidding retailing was retained, but with the reopening of the question this too will again be involved in the litigation.

Immediate attention of the large packers is centered, however, not on agreements in the United States but on the proposal of Uruguay that state-owned packing houses be established in Argentina and Brazil, similar to Uruguay's state-owned plant, as the center of a tripartite agreement to free South American livestock breeders from control of United States and British packers. A conference is being held, and a number of trade agreements for mutual advantage are being discussed. A meat-price agreement seems to be the most important goal of the project at present.

MILK PRICES, like Manchurian affairs, are still in a jumble. In spots it looks like war, but it's mainly economics in action. Over-supply outside Eastern cooperatives goes to market through independents at cut prices. The big distributors are hit. They "confer" with the cooperatives, and prices go down to both the public and the dairymen. Dairy farmers, crying over milk sold at 3c. a quart, are told about low feed prices.

Buffalo, N. Y., is a real war zone. Here delivered milk prices have ranged from 5 to 8c. per quart for more than a month. Cooperatives, farmers, and dealers are losing, and telling the public of it in full-page newspaper advertisements. Involved in the battle are the Dairymen's League Cooperative Association, the Unity Cooperative Dairymen's Association, dealers large and small, and independent farmers now being offered from 70c. to $1.25 per 100 lb. for fluid milk, with production cost estimated in 1930 at $2.87. In Utica, N. Y., prices to members of cooperatives were lowered 10½c. per 100 lb. from the October price. In Syracuse, retail drivers absorbed the 1c. drop in retail prices.

The loose milk question has complicated things in New York City. Following a recommendation that loose milk be forbidden next year, Borden's and the Dairymen's League dropped prices on bottled milk sold through stores 2 to 3c. Sheffield Farms, a National Dairy subsidiary, followed with a 2c. cut in delivered milk. Long conferences between Borden interests and Dairymen's League, Borden's chief source of supply, preceded a decision to meet the reduction. "A calamity," F. H. Sexauer, Dairymen's League president, termed it, as price to producers was lowered 74c. per 100 lb. Independent producers and dealers were blamed.

New England also is involved. In Boston, Whiting Milk Cos. cut retail prices to 10c. a quart, prices to producers to 5c.,

Doing and Saying

Big Guns in the Milk War—A New Struggles With Sugar—"Rich Man's Calls the Canners

despite protest from the New England Producers' Association. "The whole price structure is substantially below the cost of production," said Harry R. Lewis, Rhode Island Commissioner of Agriculture, following reduction of 1c. a quart to members of the New England Milk Producers' Association in that state. He urges that, acting as State Milk Administrator, he be given authority to set up an administration system for Rhode Island with an arbitration board of three to establish cost-price levels. An appeal to governors of five states for establishment of a tribunal was made on Dec. 16 at a Boston conference.

"POOR MAN'S BUTTER," is "rich man's graft," said a broadside of the National Dairy Union, Washington, D. C., and the Crescent Creamery Co., Sioux Falls, S. D. Now the Federal Trade Commission has ordered them to prove it, ruling that this and other statements constitute an unfair method of competition. The dairy groups had cited figures implying that the cost of 1,000 lb. of margarine was $107.50, had compared the copra used in its manufacture to stable manure. A vivid description of half-naked Malays trampling copra under perspiring feet was a part of the bulletin. Ironically enough, I. H. Dokken, president of the Crescent Creamery, informed the Trade Commission in reply that the material was garnered from releases of the State Department of South Dakota.

A PRECARIOUS SITUATION still exists for the Chadbourne plan to regulate world sugar production. Four days of negotiations in Paris by the International Sugar Council brought no definite action to reconcile Cuban and Javanese producers. In January, the struggle will be renewed.

No one has violated the original agreement reached last May except sugar consumers. Consumption, particularly in the United States and the Orient, has dropped to such an extent that a surplus of 1,200,000 tons is expected by April, 1932. Cuban producers have urged that cane in Java fields be left uncut. Java does not read the agreement that way. During the recess, figures on next year's plantings in Java are being gathered. Some Cuban producers are said to see a need for a cut in quotas as great as 40 per cent.

BIG DOINGS FOR CANNERS and related groups are on the horizon as the yearly gathering in Chicago grows closer. The National Canners' Association will meet at the Stevens Hotel, Jan. 25-28; National Preservers' Association at the Congress Hotel, Jan. 25-27. Other groups meeting in Chicago during the week include the National Pickle Packers', National Kraut Packers', National Food Brokers', National Wholesale Grocers' Associations.

As usual, the focal point will be the exhibition of equipment and supplies at the Stevens. The equipment association has already done itself proud with an enticing 48-page booklet. "All Aboard for the Big Show," telling what's to be seen. FOOD INDUSTRIES will have a booth. Drop in and see us.

MORE RED TAPE than ever has been devised by the Treasury Department and the Department of Justice to check up on cereal beverage makers. Amended regulations, announced Dec. 10, call for a daily report of operations, to be completed each day before the close of business, and kept available for inspection. Sales records for the government's perusal must include names and addresses of all purchasers and quantity sold. Sworn statements of operations must be sent in each month. The government will establish the maximum storage capacity permitted in each plant.

Other amended regulations call for numbering or lettering of cellar doors and all equipment. All tanks or vats must have their capacity painted on the outside, and must be equipped with gage glasses or other gaging devices that the inspector can operate. Special written permission must be sought whenever it is desired to carbonate the beverage before de-alcoholization.

A SUIT against the McNary-Mapes Law, and an injunction to prevent its enforcement, was filed in the San Francisco federal court on Dec. 16 by the E. Clemens Horst Co. Three thousand dollars damages are asked from Secretary of Agriculture Hyde and the chief of the San Francisco division of the Food and Drug Administration because 7,524 cases of peaches of the 94,000 cases packed by the Horst Co. this year were required to be labeled substandard. Lack of uniform slicing led to the inferior grading, the complaint holds, although such slicing did not impair the quality of the fruit.

—AND THE NEXT

FEBRUARY

1-2—Potomac States Bakers' Association, Lord Baltimore Hotel, Baltimore, Md.

8-11—Associated Bakers of America (Retail Bakers' Week and Exhibit), Jefferson Hotel, St. Louis, Mo.

10-11—National Cheese Producers' Federation (place undecided).

(Date Undecided)—Eastern Confectioners' Traffic Bureau, New Yorker Hotel, New York, N. Y.

22-23—Eastern Federation of Feed Merchants, Hotel Onondaga, Syracuse, N. Y.

Do you know of a national convention that we have neglected to list? The editors will appreciate your help in making this calendar accurate and complete.

Behind a wall of glass, candy-making equipment in the newest Loft, Inc., retail store shows the public how it's done

Underwood & Underwood

PERSONAL

HERBERT ANSCOMB, retiring mayor of Victoria, B. C., has been appointed general manager of the Growers' Wine Co., Ltd. He will assume his new duties on Jan. 1.

WALTER E. BUEHRING, Buffalo, N. Y., was recently elected president of the Grocery Manufacturers' Association of that city.

C. C. CHAPMAN, Fullerton, Calif., has been elected president of the California Citrus League. He succeeds E. M. LYONS, of Redlands, Calif.

DONALD K. DAVID has been named president of the American Maize Products Co., New York, N. Y. He succeeds C. D. EDINBURG, who has been made chairman of the executive committee. Mr. David was formerly a vice-president. He is also a director of Standard Brands, Inc., and of R. H. Macy & Co., New York, N. Y.

EDWIN A. DAVIS, Milford, Ill., has recently returned to United States from the U.S.S.R., where he was employed by Soyuzkonserve, the state food preserving organization.

DONALD W. DRUMMOND, for three years sales manager of the Solid Carbonic Co., Ltd., has resigned to become vice-president in charge of sales of Fitzgibbons & Crisp, Inc., Trenton, N. J., joint owners with Solid Carbonic of the Icefin CO_2 Engineering Corp.

CLARENCE FRANCIS has been appointed executive vice-president of General Foods Corp., New York, N. Y., it was announced on Dec. 24. Since 1929 the organization has had two executive vice-presidents; RALPH G. COBURN will continue in that capacity, but EDWIN E. TAYLOR has resigned. Mr. Francis was formerly vice-president in charge of sales and president of General Foods Sales Co., Inc. He will be succeeded in that position by JAMES F. BROWNLEE, and Mr. Brownlee's former duties of sales planning will go to CARL WHITEMAN, vice-president of the sales company in charge of planning and operations.

CARLETON A. FRIDAY, for the past six years active manager of the Friday Canning Co., New Richmond, Wis., has been elected president to succeed his father, who died Aug. 14. He was formerly associated with his father in the Badger Canning Co., Beaver Dam, Wis.

DESALES HARRISON, has been made vice-president and regional sales manager of the Coca-Cola Co, Atlanta, Ga. He will be in charge of the regional headquarters at New Orleans, La. Mr. Harrison was formerly assistant to the regional manager, having joined the Coca-Cola Co. in 1925. Previous to that time, he had been with the Nunnally Co. as divisional manager.

L. M. HEWITT, who has been manager of the Cleveland (Ohio) branch of the California Fruit Growers' Exchange, has been transferred to the Chicago branch. O. G. BUTTS, formerly in charge in Pittsburgh, Pa., will succeed Mr. Hewitt.

LORD INVERFORTH, British banker and shipping leader, has been named president of Thomas J. Lipton, Inc., succeeding the late SIR THOMAS LIPTON. Management of the American division will not be changed.

B. H. KROGER has resigned as a director of the Kroger Grocery & Baking Co., Cincinnati, Ohio. His son, B. H. KROGER, JR., was elected to take his place. The senior Mr. Kroger resigned as president in 1927.

ARTHUR W. MILBURN, formerly president of the Borden Co., New York, N. Y., has been elected "chief executive and chairman of the executive committee," a new office, and ALBERT T. JOHNSON, formerly vice-president, has been made president. Another new office, executive vice-president, will be filled by WALLACE D. STRACK, also formerly a vice-president.

HORACE S. RIDLEY, formerly first vice-president of the New England Confectionery Co., Cambridge, Mass., has been elected president to succeed the late FRED S. HAYWARD. Mr. Ridley has been connected with the company since it was founded in 1901, having previously been employed by Chase & Co., one of the organizations which consolidated to form the New England group. HARRY C. ACHORN, a vice-president, has succeeded Mr. Ridley as first vice-president.

FREDERIC S. SNYDER, who recently resigned as chairman of the board of the Institute of American Metal Packers, has been elected president of the Chamber of Commerce of Boston, Mass. Mr. Snyder had retired as head of Batchelder, Snyder, Dorr & Doe, Boston, early last autumn.

C. B. WILTROUT, manager of the Freeport (Ill.) plant of the Kraft-Phenix Cheese Corp., has resigned, effective Jan. 1. For a number of years Mr. Wiltrout was manager of the Ladysmith Cheese Co., Freeport, and in 1928 he established the Breakstone Bros. process cheese plant in that city. He became affiliated with Kraft-Phenix when it absorbed Breakstone Bros. early last year.

OBITUARY

KNOWLTON L. AMES, who resigned as president of Booth Fisheries Co. a few months ago, committed suicide in Chicago, Ill., on Dec. 23. Financial matters were reported to be responsible. Mr. Ames was owner of the Chicago *Journal of Commerce* and the Chicago *Evening Post*. He was 62 years old. In his youth he was famed as a football player, receiving all-American honors on the Princeton team of 1889.

AUGUST J. ANDERSON, who retired about a year ago as inspector of bottling plants for the State of Minnesota, died on Dec. 7 at the age of 71. He has been connected with food inspection in the state for a number of years, serving as inspector of canneries for a considerable period.

GEORGE L. BRIMER, vice-president and general manager of the Chicago (Ill.) Good Humor Co., died on Nov. 29. He was 34 years of age.

RITCHIE L. DUNN, SR., former president of the American Biscuit Co., San Francisco, Calif., until its consolidation with the National Biscuit Co. a year ago, took his own life Dec. 14. He was 63 years of age. Mr. Dunn was also vice-president of the California Cracker Co., and a director of the Pacific Mushroom Co. and the Capital Cracker & Candy Co. of Sacramento.

WILLIAM A. GERMAN, branch manager of the Crandall Packing Co., Cleveland, Ohio, died on Dec. 29 at Palmyra, N. Y. He was secretary-treasurer of the organization for many years. Mr. German was 48 years old.

WILLIAM R. HALSTEAD, for many years connected with the canning industry in Cortland County, New York, died a short time ago at the age of 70. Until two years ago, he was president of the Halstead Canning Co., operating plants in Cortland and Interlaken, N. Y.

LEWIS R. HARDENBERGH, president of Nestle's Milk Products, Inc., died in New York, N. Y., on Dec. 15. He was one of the founders and for many years senior vice-president of the Carnation Milk Co., leaving that organization to become president of Nestle's in 1925. He was also a director of the Holland Food Corp. Mr. Hardenbergh was 53 years of age.

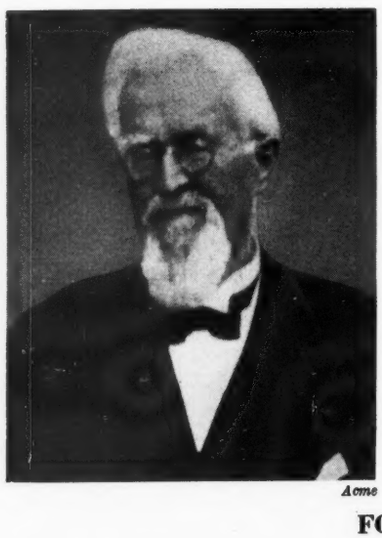
HENRY HEIDE, one of the best known figures in the American candy industry, died on Dec. 13 at the age of 85. A native of Germany, Mr. Heide came to this country in 1866. After two years in Pittsburgh, Pa., he began the manufacture of candy in New York. From that time on the Heide organization continued to expand. He still held the office of president of Henry Heide, Inc., at the time of his death. He was also widely known as a philanthropist.

JOHN F. JELKE, SR., founder of the oleomargarine company bearing his name, died in Chicago, Ill., on Dec. 4. He was 78 years of age. He was succeeded as president of the John F. Jelke Co. by his son in 1925, and resigned as chairman of the board in 1930. Mr. Jelke had a number of legal tilts with the government on the oleomargarine question. At one time he was pardoned by President Wilson after being sentenced to two years in jail.

CHARLES E. MENCHES, known as the inventor of the ice cream cone, died recently in Akron, Ohio, at the age of 72. Operator of a circus concession where waffles and ice cream were sold, he noticed that some of his customers combined the two and thus got the idea for cones. He founded the first ice cream cone factory in 1905.

R. J. RASMUSSEN, efficiency and quality-control expert in the packing-house industry, died in McKeesport, Pa., on Nov. 17. He was 67 years old. At the time of his death he was associated with the Peters Packing Co., having previously been employed in a score of packing houses throughout the country, including Swift & Co. and Armour & Co.

The Late Henry Heide



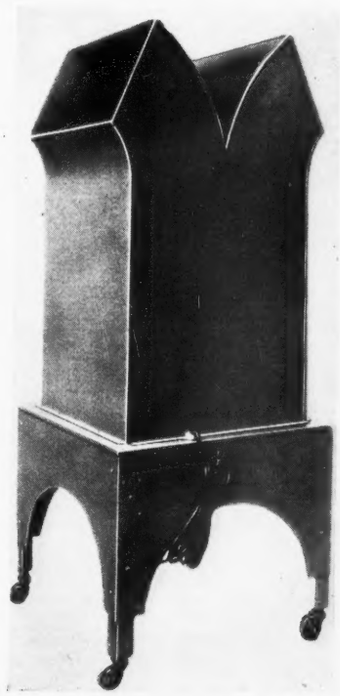
Acme

NEW EQUIPMENT FOR FOOD MANUFACTURERS

Directed Currents Prevent Localized Air Conditions

Constructed to force air from near the floor to dual-discharge outlets near the ceiling of a room the air circulator recently developed by William J. Lohman, Inc., 92 Warren St., New York, N. Y., breaks up air pockets in inclosed spaces and prevents stratification of air in refrigerated rooms. By giving the air in the room a slow and gentle but definite and continuous circulation this unit is said to make economical and effective use of existing temperature modifying installations in food-processing and storage plants not equipped with the latest air-conditioning units.

Reported tests show that localized condensation of water with resulting drips and unsanitary, ofttimes, product-contaminating



or degrading, conditions is prevented by the air currents set up by the motor-driven fan operating at the base of the metal shaft. This fan rotates through a horizontal plane and drives the air of lowest temperature near the floor of a room in a vertical direction until the openings as shown in the illustration deflect the air currents toward the sides of the room. In this manner stratification of cold moisture-laden air near the floor and warm moisture-carrying air near the ceiling is prevented. Also the formation of stale, musty, and other disagreeable odors is said to be discouraged and the rotting of the floors and walls of the refrigerated rooms to be prevented.

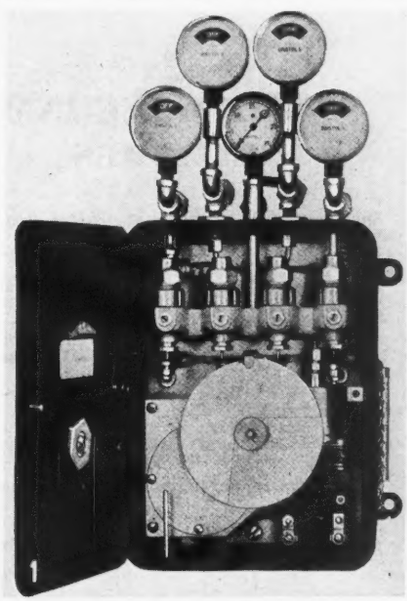
The circulator is made in four sizes, drives from an electric light socket, and is adaptable for use in confectionery hand-dipping rooms, meat and poultry storage and handling plants, and other food processing or storage plants under modified temperature conditions in which air-circulating units are not a part of the air-conditioning system.

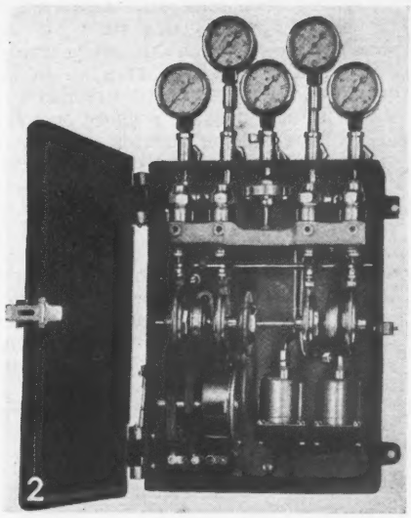
Pneumatic Cycle Controller

A pneumatic regulator manufactured by the Bristol Co., Waterbury, Conn., controls process cycles where the different events in the cycle overlap and where utmost flexibility is required. Several individual cams (Fig. 2) are mounted on a common shaft and each is adjustable to regulate the duration of its influence in the cycle and its position in the sequence of events. Two pressure switches associate the starting and stopping of the motor with the different events in the cycle.

A single cam controller (Fig. 1) in which a motor-driven cam actuates a number of pilot valves is available for processes where the sequence of events which terminate the cycle is the reverse of their order at the beginning of the cycle.

These instruments are used in conjunction with pneumatic or electric regulating devices for pressure, temperature, and the like, and for control in which a certain degree of interlocking is required. They



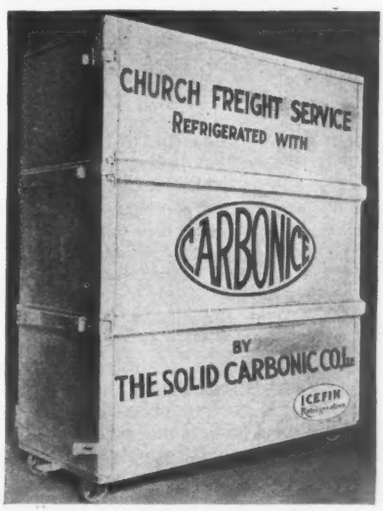


are reported to give simplicity to automatic control of process cycles by actuating diaphragm-operated valves. Where the starting and stopping of the motor is associated with different events in the cycle, two pressure switches may be obtained.

An Aid to Distribution Of Perishable Foods

Freight shipments of frozen foods in 800- to 1,000-lb. quantities in ordinary freight cars were proved feasible in a recent test using the Church freight service container manufactured by the Pressed Steel Car Co., Pittsburgh, Pa.

In this test an 800-lb. lot of frozen salmon was shipped by the Atlantic Coast Fisheries, New York, N. Y., to a consignee at Syracuse, N. Y., by such a



route that three days was required to make the trip. Although the atmospheric temperature was 76 deg. F. at time of loading, only a total of 55 lb. solid CO_2 was actually consumed in cooling the container and maintaining an average temperature of 16 deg. F. for the three days.

The container was of the insulated type lined with 2 in. of balsa wood, fitted with a regular refrigerator door, and equipped with an Icefin unit manufactured by Fitz Gibbon & Crisp, Inc., Trenton, N. J.

Non-insulated containers having the same outside dimensions, 6x2⅔x6½ ft., and

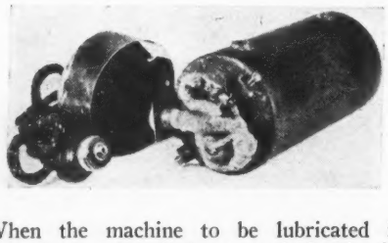
the same general construction are available for shippers who desire them for less perishable foods which they might want to ship direct to consignee as a lot in l.c.l. quantities. The general construction is of sheet steel and they are mounted on rollers to facilitate moving about in the factory or shipping room, in or out of a freight car, and on or off a truck. Twenty can be loaded into a 40-ft. box car. The insulated type weigh about 700 lb. and the non-insulated about 400 lb. These containers have been developed to make railroad freight handling less expensive, to eliminate unnecessary packing and handling labor, and to make the customary and comparatively expensive packing cases unnecessary.

The illustration shows an exterior view of the container loaded and ready to be rolled into a freight car.

Temperature-Controlled Oiling System

Expansion of a constant quantity of oil through a temperature range of 50 deg. F. provides the pressure necessary to operate the automatic oiling system being marketed by the Motor & Plane Accessories, Inc., Detroit, Mich.

This system is applicable for use on industrial machinery and motor-truck chassis and can be regarded as a safeguard against deficient oiling due to chilling of lubricant. It consists of an oil tank made by the Westinghouse Electric & Manufacturing Co. equipped with a heater unit which is separated from direct contact with the oil.



When the machine to be lubricated is started, the electric heater unit inside the tank is automatically turned on and the rise in temperature of the oil causes expansion, which forces oil out of the tank to the bearings, where metering devices control its flow. After the temperature has reached 150 deg. F., a thermostat breaks contact and allows the oil to cool to 100 deg. F. At that temperature the thermostatic switch again makes contact and repeats the heating of the oil.

During the cooling process a back pressure occurs which is utilized to refill the tank from a central supply or reservoir. Drawing of oil from the bearings is prevented by a check valve in the main feed line. Pressure on the main line while the tank is refilling is maintained by auxiliary feeder. Under such operating conditions there is no time during the operation that there is a lack of pressure in the feed line. This oiling system operates every two hours.

In motor truck lubrication, a very small tank is installed in the channel of the frame and new oil is taken either from the central tank or from a built-in tank in the filler spout of the motor. Every time oil is put into the engine, it automatically refills the tank on the filler spout, thus assuring clean oil for the system.

THE MANUFACTURERS OFFER

How to Take Inventory in Manufacturing Plants—30 page booklet describing methods and points of importance as well as showing forms that are applicable. Barrett Bindery Co., 1328 West Monroe St., Chicago, Ill.

Glassware for the Dairy Industries—32-page booklet, 3¾x6¼; includes a manual on dairy testing and various data tables in addition to illustrated descriptions and prices on dairy glassware. Kimble Glass Co., Vineland, N. J.

Seamless Drawn Fittings—Bulletin 1R; gives dimensions and specifications for 90 deg. elbows for pipe welding. Tube-Turns, Inc., Shelby St. & Goss Ave., Louisville, Ky.

Small Motors—Bulletins No 167 in five parts of 30 pages, bound in looseleaf form; illustrate and describe various types of small motors and their component parts. Wagner Electric Corp., St. Louis, Mo.

Recording Temperature Controllers—Catalog No. 4001 of the Bristol Co., Waterbury, Conn.; describes and illustrates free vane, air-operated, recording, temperature controlling instruments.

Stainless Metal in Dairy Industries—Republic Steel Corp., Massillon, Ohio, in a 20-page illustrated booklet describes and gives uses of equipment made from Enduro KA2 alloy.

Steam Traps — The Armstrong Trap Magazine, published by the Armstrong Machine Works, Three Rivers, Mich., is devoted to results obtained by the use of Armstrong steam traps.

Centrifugal Pumps — Bulletins No. 216 and 217, devoted to multi-stage and single-stage centrifugal pumps, manufactured by the Pennsylvania Pump & Compressor Co., Easton, Pa., have respectively 16 and 8 pages devoted to descriptive and illustrative material.

Ice Cream Handling — Booklet entitled "Better Ice Cream From Air-Conditioned Freezer and Brick Cutting Room," bulletin No. 31168. York Ice Machinery Corp., York, Pa.

Caramel Cutter—The Rakama automatic caramel cutter, a complete unit consisting of the sizing apparatus, cooling conveyor and the cutting machine with one change of cutters is described in a leaflet prepared by T. C. Weygandt Co., 165 Duane St., New York, N. Y.

Making the Refrigerating Equipment Pay for Itself—Illustrated reprint of paper read by Mr. J. C. Tweedell before International Association of Ice Cream Manufacturers, Atlantic City, N. J. York Ice Machinery Corp., York, Pa.

Refrigerated Truck Body — An 8-page folder illustrated by colored photographs and diagrammatic drawings, showing details and giving specifications of truck bodies refrigerated by solid CO_2, salt and ice, and mechanical means. Hercules Products, Inc., Evansville, Ind.

Cases for Frozen Foods—A 24-page booklet devoted to merchandising packaged frozen foods, and to refrigerated cases for this purpose. C. V. Hill & Co., Inc., Trenton, N. J.

Bodies for Ice Cream Trucks—Catalog No. 1031 devotes 20 pages to illustrations and descriptive matter on truck bodies using the Icefin system of solid CO_2 refrigeration. Fitz Gibbon & Crisp, Inc., Trenton, N. J.

Sodium Metasilicate — A 12-page illustrated booklet devoted to Metso sodium metasilicate, its properties, and uses in various food industries for germicidal as well as cleansing purposes. Philadelphia Quartz Co., 121 South 3d St., Philadelphia, Pa.

Speed Reducers—Details of construction and illustrations showing types and uses of installations of worm gear speed reducers as well as other descriptive material are given in the 64-page catalog No. 50. W. A. Jones Foundry & Machine Co., 4401 Roosevelt Road, Chicago, Ill.

Wooden Barrels—Membership of Associated Cooperage Industries of America and copies of illustrated advertisements of wooden barrels showing construction and uses, are given in a 28-page booklet available to barrel users. Associated Cooperage Industries of America, Railway Exchange Building, St. Louis, Mo.

Automatic Water Cooling Unit for Bottlers—Bulletin No. 30163, published by York Ice Machinery Corp., York, Pa., includes chart studies and illustrations of unit installations for bottling plants.

Potato Flour Guide & Formulas—Helpful hints for the use of pure Idaho potato flour and practical suggestions for better rye bread are contained in two bulletins prepared by the Rogers Bros. Food Products Co., 326 West Madison St., Chicago, Ill.

THE GOVERNMENT PUBLISHES

Spectrographic Analysis of Marine Products, by John M. Newell and E. V. McCollum. Bureau of Fisheries, Investigational Report 5; 5 cents.

International Trade in Fish Meal. Bureau of Foreign and Domestic Commerce, Trade Information Bulletin 779; 10 cents.

Studies on the Oyster Drill (*Urosalpinx Cinera*, Say), by Henry Federighi. Bureau of Fisheries, Bulletin 4; 20 cents.

Federal Specifications. Issued by Federal Standard Stock Catalog Board, as follows: Canned asparagus, cereals (breakfast foods), canned peas, canned prunes, and canned lima beans; 5 cents each.

United States Philippine Tariff and Trade Relations. U. S. Tariff Commission, Report 18, Second Series; 25 cents.

United States Trade With Latin America, 1930, compiled by H. S. Guista. Bureau of Foreign and Domestic Commerce, Trade Promotion Series 124; 20 cents.

Survey of Oyster Bottoms in Texas, by Paul S. Galtsoff. Bureau of Fisheries, Investigational Report 6; 10 cents.

Conditions Affecting Fisheries in Upper Mississippi River, by M. M. Ellis. Bureau of Fisheries, Fishery Circular 5; 5 cents.

Commercial Travelers' Guide to Latin America, Fourth Edition, 1931. Bureau of Foreign and Domestic Commerce, Trade Promotion Series 122; $1.50. A commercial geography of Latin America.

Costs, Markets, and Methods in Grocery Retailing. Bureau of Foreign and Domestic Commerce, Distribution Costs Studies No. 8; 20 cents.

Convention Dates of Trade Associations. Mimeographed document from the Chamber of Commerce of the United States dated Oct. 1, 1931. A geographical list according to the cities in which meetings are scheduled to be held, with supplemental alphabetical list of associations for which meeting place is undecided.

CONSTRUCTION NEWS

Bakery—Walter Allen, Llano, Tex., preparing plans for construction of a 1 story, 40 x 60 ft. bakery. Estimated cost $25,000. Private plans. Machinery will be installed.

Bakery—C. C. Bell, 8 South Ave., Cranford, N. J., Archt., will receive bids about March 1 for a 1 story bakery plant, for Owner, c/o architect. Estimated cost $40,000.

Bakery — Browns Bread Ltd., 426 Eastern Ave., Toronto, Ont., plans construction of a 2 story bakery on Gibson Ave., Hamilton. Estimated cost $60,000. Sydney Comber, 620 Cathcart St., Montreal, Que., is architect.

Bakery—C. P. Dickinson, 336 Main St., Fitchburg, Mass., awarded contract for addition and alterations to bakery to W. J. Handley Co., 280 Main St., Fitchburg. Estimated cost $40,000.

Bakery—J. Hahn Realty Co., 2801 South 7th St., St. Louis, Mo., awarded contract for a 1 story, 24 x 139 ft. addition to bakery at 2809 South 7th St. to Fred Schroeder, 3860 Arsenal St., St. Louis. Hauck Bakery Co., 2809 South 7th St., St. Louis, lessee.

Bakery—Wolf Baking Co., c/o P. H. Wolf, 637 South St. Marys St., San Antonio, Tex., plans construction of additional unit to plant. Estimated cost $40,000. Private plans. Machinery and equipment will be required.

Bakery Machinery Plant—Perkins Bakery Co., Saginaw, Mich., manufacturers of bakery and confectionery machinery, plans construction of a plant at Sarnia, Ont. Equipment will be required.

Biscuit Factory — Loose-Wiles Biscuit Co., Commerce Bldg., Kansas City, Mo., preparing plans for first unit of factory including warehouse, manufacturing and distribution building at Avalon and Gage Sts., Los Angeles, Calif. $100,000. Total cost $1,000,000. Claud Beelman, 1019 Union Bank Bldg., Los Angeles, is architect.

Bottling Plant—Coca Cola Co., 3216 Sacramento Blvd., Sacramento, Calif., preparing plans for construction of a 2 story, 75 x 120 ft. bottling plant on Miller Way. Estimated cost $40,000. C. Dean, California State Life Bldg., Sacramento, is architect.

Bottling Plant—Greensboro Coca Cola Bottling Co., Greensboro, N. C., awarded contract for construction of a 2 story bottling plant to George W. Kane, Greensboro. Estimated cost $75,000.

Brewery—Ambassador Breweries Ltd., Sarnia, Ont., plans construction of a brewery. Equipment will be required.

Brewery—Huether Brewing Co., W. Renaud, Mgr., King St. W., Kitchener, Ont., will soon start work on 4 story, 40 x 50 ft. addition to brewery. W. H. Schmalz, 129 King St. W., Kitchener, is architect. Will install equipment including malt mill, mash tubs, brew kettles and equipment, also cooling room and beer tanks.

Brewery—Northwest Brewing Co., 105 East 26th St., Tacoma, Wash., awarded contract for construction of a 6 story, 30 x 130 ft. brewery at 107 East 26th St., to R. M. Grant, 414 South I St., Tacoma. $40,000. Equipment including tanks, pipe, boilers, etc., will be installed.

Candy Factory—Gunz-Durber Candy Co., 19 Marion St., Oshkosh, Wis., plans reconstruction of 2 story candy factory destroyed by fire. Estimated cost $40,000. Architect not selected.

Canning Plant — Felice & Perrelli, Gilroy, Calif., awarded contract for a 1 story canning plant to J. Rikshein, Gilroy. Estimated cost $30,000 exclusive of equipment.

Canning Plant—C. H. Rodriguez, 1200 Jefferson St., Brownsville, Tex., preparing preliminary plans for a 1 story canning plant for oysters, winter vegetables and citrus. Private plans. Wants prices and data on complete equipment.

Canning Plant—Stacey Fisher & Chester Paul, c/o J. C. Bull Co., Arcata, Calif., plans construction of a 60 x 100 ft. canning plant. Estimated cost $40,000 exclusive of equipment.

Canning Plant — Wilmington Packing Co., New Boston St., Woburn, Mass., will soon award contract for construction of two complete units to canning plant. A. Dinio, c/o owner, is architect.

Creamery and Dairy Barn—State Department of Public Works, Division of Architecture, Sacramento, Calif., having revised plans prepared for a creamery unit and dairy barn at Preston School of Industry, Ione. Former bids rejected.

Dairy Building—Dairy Delivery Co., 3550 19th St., San Francisco, Calif., subsidiary of Borden Co., 350 Madison Ave., New York, N. Y., plans construction of a dairy plant at Potrero Ave. between 25th and Army Sts., San Francisco. $500,000.

Dairy Building—Kroger Grocery & Baking Co., 35 East 7th St., Cincinnati, O., awarded contract for a 2 story, 140 x 374 ft. warehouse and dairy building on Depot St. to Parkway Construction Co., Keith Bldg., Cincinnati. Estimated cost $150,000.

Ice Cream Plant — Appleton Pure Milk Co., 714 West Washington St., Appleton, Wis., awarded contract for construction of a 2 story, 48 x 50 ft. ice cream plant to George Ashman, 206 South Memorial Ave., Appleton. Estimated cost $40,000.

Ice Cream Manufacturing Plant—Brookfield Ice Cream Co., 63rd St. and West 16th Ave., Brooklyn, N. Y., lessee, plans alterations and extensions to plant. C. G. Wessel, 1399 East 4th St., Brooklyn, is architect.

Ice Cream Manufacturing Plant—J. M. Horton Ice Cream Co., 205 East 24th St., New York, N. Y., having preliminary plans prepared for construction of ice cream manufacturing plant. Estimated cost $55,000. J. E. Ross, 25 West 43rd St., New York, is architect.

Ice Cream and Dairy Plant — Banner Ice Cream Co., c/o O. D. Dillingham, Abilene, Tex., will soon award contract for construction of a 2 story ice cream and dairy plant at San Angelo. Estimated cost $40,000. Private plans. Some equipment purchased.

Milk Station—C. L. Woodland, 54 Waverly Ave., Watertown, Mass., awarded contract for a 1 and 2 story milk station to L. C. Titus, 60 Lincoln St., Watertown. Estimated cost $40,000.

Cold Storage Plant—Swift & Co., Packers and Exchange Aves., Chicago, Ill., plans construction of a cold storage plant at Greensboro, N. C. Estimated cost $40,000.

Cold Storage and Refrigeration Plant—Canastota Refrigerating Co., Canastota, N. Y., c/o Frank Hill & Associates, North Rose, acquired yeast and vinegar plant of General Foods Corp. and will remodel for cold storage and refrigeration plant at Canastota.

Cooling Plant — Boston Food Products Co., 532 Commonwealth Ave., Brighton, Mass., preparing preliminary plans for construction of a cooling plant. Estimated cost $50,000. Private plans.

Ice House—Lundberg Co., Forest City, Ia., plans construction of a new 100 ton ice house including refrigeration equipment.

Ice Plant—Block Ice & Cold Storage Co., Toms River, N. J., plans reconstruction of ice plant destroyed by fire, at Manasquan. Estimated cost $40,000. Architect not selected.

Ice Plant — Saverco Poluso, Lincoln Pl., Asbury Park, N. J., awarded contract for construction of a 1 story ice plant to William Alex Taylor, Lincoln Pl., Asbury Park. Estimated cost $40,000.

Ice Manufacturing Plant—Lutz Ice Co., W. C. Jacobsen, Secy., 109 North Morrison St., Appleton, Wis., awarded contract for a 2 story, 85 x 150 ft. ice manufacturing plant, to Appleton Construction Co., 201 East College Ave., Appleton. Estimated cost $40,000. Equipment will be required.

Ice Plant—Park City Ice Co., 558 Howard Ave., Bridgeport, Conn., awarded contract for a 2 story, 45 x 60 ft. ice plant on Howard St., to Patsy Frank Inc., 1438 Main St., Bridgeport. Estimated cost $40,000.

Food Products Plant—American Stores Co., 242 North 19th St., Philadelphia, Pa., awarded contract for construction of a distribution plant at Baltimore, Md., to Turner Construction Co., Graybar Bldg., New York, N. Y. Estimated cost $125,000.

Food Products Plant—Gristede Bros., 1885 Park Ave., New York, N. Y., awarded contract for construction of a distribution warehouse at MacQueston Parkway, Grove and South Sts. to Barney Ahlers Construction Co., 110 West 40th St., New York. Estimated cost to exceed $50,000. Bids will be received about January 2 for electric and refrigeration equipment.

Flour Mill—D. C. Thompson, Orillia, Ont., plans to rebuild flour mill destroyed by fire. Loss $50,000. Interested in prices on complete equipment.

Grain Elevator — United Soviet Socialist Russia, c/o Amtorg Trading Corp., 261 5th Ave., New York, N. Y., plans construction of a grain elevator, 100,000 ton capacity, at Leningrad.

Abattoir—Ottawa Valley Packing Co., Renfrew, Ont., awarded contract for a 2 story abattoir building to M. J. Sulphur, Lisgar St., Renfrew. Estimated cost $100,000.

Abbatoir — United Butchers Abbatoir Co., Arthur Monk, Pres., 3055 Ludlow St., Philadelphia, Pa., will soon award contract for construction of a 1 and 2 story, 72 x 148 ft. building. Estimated cost $200,000. Stadler Engineering Co., 140 Liberty St., New York, is engineer.

Meat Plant—Brighton Dressed Meat Co., 39 Commercial St., Boston, Mass., will soon award contract for a 2 story addition to meat plant. Estimated cost $40,000. Worcester Tram Rail Co. Inc., 10 T Wharf, Boston, is architect.

Packing Plant—Hardy Bros., Orland, Calif., will build a packing plant, 22,000 ft. floor space. Work will be done by owner's forces.

Packing Plant—Southern Pacific Ry. Co., 65 Market St., San Francisco, Calif., awarded contract for construction of a 2 story, 40 x 50 ft. packing plant at Elsa, Tex., to Rio Grande Construction Co., San Benito. G. W. Boschke, San Francisco, is chief engineer.

Packing Plant — Engineering Department, Union Pacific System, Pacific Electric Bldg., Los Angeles, Calif., awarded contract for construction of a 1 story, 80 x 150 ft. packing plant at Fourth and Vine Sts., to T. C. Pritchard, 5260 Magnolia Ave., Riverside. Estimated cost $50,000.

Lemon Storage Building—Upland Lemon Growers' Association, Upland, Calif., preparing plans for a 2 story, 140 x 200 ft. lemon storage building at Fourth Ave. and A St. Estimated cost $40,000. W. W. Ache, 1616 Fourth St., Upland, is architect.

Packing Plant (Citrus and Vegetable)—Lovett & Kirk, San Benito, Tex., plans construction of 1 story, 25 x 50 ft. citrus and vegetable packing plant. Private plans. Work may be done by day labor.

Packing Plant (Vegetable) — California Vegetable Products Corp., Los Angeles, Calif., plans construction of first unit of vegetable packing plant, 1 and 2 story, 90 x 180 ft. at corpus Christie, Tex., will also soon award contract for a 1 and 2 story vegetable drying plant at San Benito. Private plans. Machinery and equipment for Corpus Christie plant will be required.

Packing Plants—Rio Grande Valley Vegetable Co-Operative Association, c/o George B. Warren, Rio Hondo, Tex., will build a 1 story, 44 x 144 ft. plant at Edinburg by day labor, also awarded contract for a 2 story, 44 x 160 ft. plant at McAllen to T. E. Carpenter, Weslaco. $25,000.

Pre-Cooling Plant—Upland Citrus Association, Upland, Calif., awarded cement, machinery and cork insulation contracts for pre-cooling plant on Third Ave. Estimated cost $60,000. W. W. Ache, 1616 4th Ave., Los Angeles, is architect.

Pre-Cooling, Packing Plant, etc. — St. Catharines Cold Storage Co., Davidson St., St. Catharines, Ont., plans construction of a precooling plant, central packing and cold storage plant. Estimated cost $100,000.

PATENT DIGEST

Baking and Milling

Air-Conditioned Proof Room — Louis S. Bressler, Chicago, Ill. No. 1,831,478. Nov. 10, 1931.

Shortening Compound Containing Lecithin—Earl B. Working, Manhattan, Kan., to American Lecithin Corp., Atlanta, Ga. No. 1,831,728. Nov. 10, 1931.

Toasted Cereal Breakfast Food Made From Puffed Rice Kernel and, in Flake Form, From Rice and Corn—Charles E. Luke to Jersey Cereal Co., Irwin, Pa. No. 1,832,813. Nov. 17, 1931.

Multiple Pocket Traveling Tray Proofer System—Henry Devlin to Baker Perkins Co., Inc., Saginaw, Mich. No. 1,832,895. Nov. 24, 1931.

Alcohol Recovered From Bread Baking Ovens—Nicholas De Navrotzky, Paris, France. No. 1,822,804. Sept. 8, 1931.

Fiber Cracker Caddy With Reinforced Bottom and Slotted Side Strips to Reinforce Sides and Support Tray—Donald G. Magill, Chicago, Ill., to American Can Co., New York, N. Y. No. 1,823,055. Sept. 15, 1931.

A Complete Unit for Cooking Flat or Annular Doughnuts in Deep Fat—Herbert T. Hunter, Catonsville, Md., to Doughnut Machine Corp., New York, N. Y. No. 1,823,146. Sept. 15, 1931.

An Endless Chain Composed of Mold and Core Plates for Baking Pastry Shells—Lewis H. Lanier, Newport, Ky. No. 1,823,151. Sept. 15, 1931.

Doughnut Machine Comprising of Cooking Tank, Two Conveyors in Tank and Turnover Paddles—Frank M. Roehl and Peter J. Toews to National Automatic Doughnut Machine Co., Minneapolis, Minn. No. 1,823,409. Sept. 15, 1931.

Canning and Glass Packing

Cans Filled by Means of Measuring Apparatus Consisting of Hopper and Longitudinally Grooved Cylinders—Stacey B. Lindley to Indiana Canning Machinery Co., Indianapolis, Ind. No. 1,833,028. Nov. 24, 1931.

Apron Type Retort Crate Loader—Miron S. Canaday, Rochester, Minn., to Reid Murdock & Co., Chicago, Ill. No. 1,825,048. Sept. 29, 1931.

Fruit Pitting Machine by Means of Which Flesh of the Fruit Is Halved and the Flesh-free Pit Is Ejected From Machine—Albert R. Thompson, San Jose, Calif., to Pacific Machinery Co., San Francisco, Calif. No. 1,825,835. Oct. 6, 1931.

Fruit Washing Machine in Which Washing Fluid Is Forced Upward Through Fruit Containing Compartments and Through Overflow Into Second Compartment Containing a Waste-Gathering Tray Through Which Waste Water Is Drawn by Suction—Alberta Irene Morton, New York, N. Y. No. 1,826,015. Oct. 6, 1931.

Confectionery

Multiple Mold for Making Frozen Confections — Norman M. Thomas, Brooklyn, N. Y., to Popsicle Service, Inc., Chicago, Ill. No. 1,831,047. Nov. 10, 1931.

Confection Enrober Fitted With Conveyor so That After Confection Units Pass Through Coating Machine, Their Movements Are Regulated to Cause the Confection Units to Attach Themselves to Each Other by Means of Plastic Coatings to Form Aggregates—Alonzo Linton Bausman, to National Equipment Co., Springfield, Mass. No. 1,826,980. Oct. 13, 1931.

Confection Enrober With Spiral Scraper in Overhead Coating Supply Receptacle and With Power-Driven Rolls for Coating Bottoms of Confections—Frederick W. Greer, Cambridge, Mass. No. 1,828,405. Oct. 20, 1931.

Chocolate Candy Bar of Brittle Type Containing Hard Candy Particles—Edward Messer, Cincinnati, Ohio. No. 1,829,568. Oct. 27, 1931.

Dairy and Egg Products

Testing Milk to Determine Physiological Condition of Cow—Georg Roeder, Leipzig, Germany. No. 1,831,034. Nov. 10, 1931.

Cooling Coils With Flow Diverting Devices to Prevent Milk Flowing Over Surfaces of Tubes From Passing to Other Side of Tubes—George W. Williams, Oak Park, Ill., to Creamery Package Mfg. Co., Chicago, Ill. No. 1,821,489. Sept. 1, 1931.

Evaporated Milk Sterilized and Canned in a Continuous Manner Without Exposure to Air—John M. McClatchie to The Borden Company, New York, N. Y. No. 1,821,943. Sept. 8, 1931.

Horizontally Mounted Rotating Drum Type of Ice Cream Freezer—John H. Westfield, Indianapolis, Ind. No. 1,823,633. Sept. 15, 1931.

Milk Treated to Yield a Product Containing Caramelized Milk Sugar and Hydrolyzed Proteins—Clinton Henry Parsons to Swift & Co., Chicago, Ill. No. 1,824,496. Sept. 22, 1931.

Eggs Weighed and Sorted Automatically—Clement Smith, Topeka, Kan. No. 1,824,693. Sept. 22, 1931.

Fruits and Vegetables

Combination Fruit Press and Strainer—Arthur Wurdack, Normandy, Mo. No. 1,831,432. Nov. 10, 1931.

Juice, Pulp, and Seed Extracted From Citrus Fruits Automatically—Guy C. Gum to Tracy Acosta, Jacksonville, Fla. No. 1,834,097. Dec. 1, 1931.

Copies of Patents

Complete specifications of any United States patent may be obtained by remitting 10c. to the Commissioner of Patents, Washington, D. C.

Photostatic copies of foreign patents may be obtained at the same address, prices being forwarded on application.

Copies of patents should be ordered by number, as titles used in this digest seldom correspond with title of patent.

Spray Residue Washed From Fruit in Open-Top Tanks Fitted With Fruit-Receiving, Rotating Drum, and Delivery Compartments—Geo. F. Frine, Sodus, N. Y. No. 1,824,814. Sept. 29, 1931.

Fruit Packers' Bench With Adjustable Tilting Frame—Albert J. Black, Whittier, Calif. No. 1,824,979. Sept. 29, 1931.

Fruits and Vegetables Pre-Ripened by Use of Portable Air-Conditioning Units Electrically Heated—Fred John Day, Los Angeles, Calif. No. 1,825,385. Sept. 29, 1931.

General Equipment

Container With Transparent Cylindrical Shaped Body Fitted With Metallic Ends Crimped Over the Beaded Edge of the Transparent Body—Herman B. Lermer to Hygienic Tube Co., Newark, N. J. No. 1,824,907. Sept. 29, 1931.

Rigid Slip-cover Tops Composed of Fiber Board Securely Closes Cylindrical Body Portion of Container, Made From Similar Material—Hans A. Eggers, Van Wert, Ohio. No. 1,824,986. Sept. 29, 1931.

Solid-CO_2 Refrigerated Storage Box Designed to Discharge the Resulting Gaseous CO_2 at a Level Below the Cover of the Container—George C. Cusack, West New York, N. J. to Dryice Equipment Corp., New York, N. Y. No. 1,825,054. Sept. 29, 1931.

Insulated Container Compartmented for Long, Narrow Packages and for Containing a Block of Solid CO_2 as Refrigerant—Charles L. Jones, Pelham, N. Y., and Howard McIlvian, Belleville, N. J., to Dryice Equipment Corp., New York, N. Y. No. 1,825,068. Sept. 29, 1931.

An Asphalt-Lined Container for Use With Solid CO_2 — David H. Killeffer, Yonkers, N. Y., to Dryice Equipment Corp., New York, N. Y. No. 1,825,073. Sept. 29, 1931.

Portable Fumigator of the Spray Type—Edward Thorndike Ladd, Lewiston, N. Y., to Isco Chemical Co., Inc., Niagara Falls, N. Y. No. 1,819,900. Aug. 18, 1931.

Double-Wall Refrigerator Chamber and Container for Use With Solid CO_2 as Refrigerant—Charles L. Jones, Pelham, N. Y., to Dryice Equipment Corp., New York, N. Y. No. 1,822,851. Sept. 8, 1931.

Macaroni Die for Making Spiral Discharge of Tubular Strands of Macaroni—Frederick Penza, Brooklyn, N. Y. One-half to Albert Chiapparelli, Brooklyn, N. Y. No. 1,822,904. Sept. 15, 1931.

Meat Packing

Bacon Shaped and Trimmed by a Combined Rolling and Cutting Machine—R. G. Reynoldson, Madison, Wis., to Allbright-Nell Co., Chicago, Ill. No. 1,825,205. Sept. 29, 1931.

Sausage Cooking Machine — Christopher Offenhauser, Philadelphia, Pa. No. 1,827,902. Oct. 20, 1931.

Recovery of Oil From Fish Meats by Centrifuging Intimate Mixture of Oil-Bearing Material and a Readily Soluble Salt.—Henrik Bull, Bergen, Norway. No. 1,828,591. Oct. 20, 1931.

Meat Hook to Operate on an Overhead Track With an Undertrack Guide to Prevent Wheel Leaving Track—Cecil C. Holley, Charleston, W. Va. No. 1,828,603. Oct. 20, 1931.

Fish Cleaned Mechanically Without Destruction of the Edible Portion of the Fish—Wesley A. Muller, Monterey, and Burt T. Youman, San Francisco, Calif., to California Packing Corp., San Francisco, Calif. No. 1,828,725. Oct. 20, 1931.

Condiment for Ground Meats Compounded From Essential Oils of Spices, Oleo Resins of Peppers, Oil Dissolving Protective Agents, and Semi-Pulverized Sugar—Hugh E. Allen, Chicago, Ill., one-half to Albert G. McCaleb, Evanston, Ill. No. 1,829,431. Oct. 27, 1931.

Miscellaneous Processes

Mushrooms Cultured on Media Prepared From Sawdust and Bran—Hikosaburo Morimoto Momoyama-Cho Fushimi-Ku, Kyoto City, Japan. No. 1,833,089. Nov. 24, 1931.

Pneumatic Conveyor for Macaroni Dryers—Francesco Patrono and Vincenzo Di Bari to the Independent Macaroni Co., Inc., Mount Vernon, N. Y. No. 1,833,853. Nov. 24, 1931.

Olive Oil Produced by Crushing Fruit, Subjecting Crushed Material to Pressures Sufficient to Force Oil-Bearing Material Through Small Orifices, Diluting Mixture of Finely Divided Material, and Centrifuging—Howard Pierson Burt and Grinnell Burt, Palermo, Calif., and Ralph E. Sanborn, San Francisco, Calif., to the California Packing Corp., San Francisco, Calif. No. 1,826,987. Oct. 13, 1931.

Nut Meats Separated From Nutshell Particles and Partially Crushed Nuts by Gravity Means—Frank A. Coari, Chicago, Ill. No. 1,827,736. Oct. 20, 1931.

Jelly Preparation Consisting of Finely Divided Pectin, Sugar, and Wax Coated Tartaric Acid Crystals—Albert Leo, Chicago, Ill. No. 1,827,794. Oct. 20, 1931.

Manufacture of Starch From Corn by Using Water Containing SO_2—Rush O. McCoy, Berwyn, Ill., and Otto A. Sjostrom, Chicago, Ill., to International Patent Development Co., Wilmington, Del. No. 1,828,334. Oct. 20, 1931.

Starch, Sugar and Molasses

Dextrose and Dextrose Sodium Chloride Manufactured From Grape Juice and From Starches—Carl Rach, New York, N. Y. No. 1,825,603, Sept. 29, 1931.

Sugar Dried by Spraying Into Current of Heated Air and Heating Resultant Powder to Form a Glasslike Mass—Shirley L. Ames, Pasadena, Calif., and Leonard Day, New York, N. Y., to Chem-Electric Engineering Corp., New York, N. Y. No. 1,826,701. Oct. 13, 1931.

Hydraulic Cam Feed Stop and Leveller—Herman J. B. Scharnberg, Fort Wadsworth, N. Y. No. 1,826,827. Oct. 13, 1931.

Sugar Washing Apparatus Under Electrical Control Systems for High- and Low-Speed Operations — Chester L. Carlson, Crockett, Calif. No. 1,828,127. Oct. 20, 1931.

Sugar Cane Mill With Crushing Rollers Designed to Receive Liquids Expressed From Crushed Cane—Albert T. Leonard, Jackson Heights, N. Y. No. 1,830,325. Nov. 3, 1931.